2010 PRODUCTS AND SERVICES CATALOG

PEO STRI

MISSION FIRST ★ PEOPLE ALWAYS

ARMY STRONG.

U.S. ARMY PROGRAM EXECUTIVE OFFICE
FOR SIMULATION, TRAINING AND INSTRUMENTATION

A Message from the PEO

James T. Blake, Ph.D. (SES)

PEO STRI plays a fundamental role in sustaining the quality and viability of U.S. Soldiers by providing them with the best available training enablers. Adaptive, versatile and full-spectrum training ensures we never place our Soldiers in a fair fight.

We must be prepared to operate simultaneously across the full spectrum of conflict whether it's offense, defense, stability or civil support operations. Regardless of the mission, we at PEO STRI pledge to provide timely, realistic, readily available, cost efficient and safe training to America's greatest asset, its Warfighters.

When we learned of the critical need for operator training for Mine Resistant Ambush Protected vehicles, PEO STRI quickly responded by getting MRAP driver and egress trainers into the hands of our Warfighters.

Similarly, we're strikingly aware of the benefits of a holistic approach to training. Over the past year, PEO STRI made significant strides to combine the virtual and constructive training environments by integrating Synthetic Environment Core and One Semi-Automated Forces. Building commonality and interoperability among training systems lends itself to greater training fidelity and realism for the Soldier, and a significant cost-savings for the Army.

In order to get these training enablers to our Warfighters in an accelerated manner, we are committed to an efficient approach to Army acquisition. Our recent award of the second STRI Omnibus Contract, or STOC II, is a clear example of our commitment.

As you well know, the Army is a "we" organization, not a "me" organization. Nothing that the Army has accomplished has been done without the hard work of many people. PEO STRI is one element of the Army team working to ensure our military is the best trained fighting force.

It's truly the privilege of a lifetime for us at PEO STRI to work for Soldiers, Sailors, Airmen and Marines. In this catalog, you will find many examples of PEO STRI's steadfast dedication to our Nation's greatest strength, our Warfighters.

Mission first, people always. Army Strong!

James T. Blake

Dr. James T. Blake
Program Executive Officer
U.S. Army Program Executive Office for Simulation, Training and Instrumentation

Mission

To provide responsive interoperable simulation, training, and testing solutions and acquisition services for the Warfighters and the Nation.

Vision

The Center of Acquisition Excellence providing simulation, training and testing solutions for the Nation.

Motto

Putting the power of simulation into the hands of the Warfighters.

Focus

- Provide simulation, training and testing products and services
- Expand beyond the traditional products and services
- Provide an integrated and interoperable infrastructure
- Shape a world-class workforce with acquisition, functional and leadership skills
- Provide a full range of contracting and acquisition services for effective, efficient and responsive life-cycle management
- Implement U.S. Army policy for acquisition of system training devices

PEO STRI Contact Information

Public Affairs Office • 407-384-5224

Industry Customer Contact • 407-384-3773

General Information • 407-384-3500

www.peostri.army.mil

History

In 1974, the U.S. Army recognized the need for new training technologies in the face of the advancing Soviet threat in Europe and established the Project Manager for Training Devices (PM TRADE). In 1976, the Army consolidated PM TRADE with the Army Training Device Agency. During the late 1980's, PM TRADE moved from the Navy base to Central Florida's Research Park. The Army proved the importance of simulation and training in 1991 with a swift victory in Operation Desert Storm. The U.S. Army's Simulation, Training and Instrumentation Command was activated on August 1, 1992, in Orlando, FL. Then in 2003, Brig. Gen. Stephen Seay became the first Program Executive Officer for PEO STRI. On June 2, 2005, Dr. James T. Blake was named the organization's first civilian leader. The partnerships that have been established and nurtured for over the years have produced a thriving and responsive simulation industry that is proudly referred to as the Center of Excellence for Simulation and Training.

Organization

The organization executes programs valued at more than $3 billion with a workforce of nearly 1,200 military, civilian and contractor personnel. PEO STRI's Acquisition Center manages more than 1473 contracts valued at more than $14.5 billion. The Army acquisition agency sustains 335,000 training systems at 600 sites worldwide, including 19 foreign countries. In addition, PEO STRI's Foreign Military Sales program supports 49 countries. Headquartered in Central Florida's Research Park, the organization also has geographically separated offices in Redstone Arsenal, AL, Fort Bliss, TX, and Fort Huachuca, AZ.

Accomplishments

Among many recent achievements, PEO STRI proudly worked in close collaboration with many other Army components to rapidly produce and field the Mine Resistant Ambush Protected (MRAP) vehicle Egress Assistance Trainer (MET) in response to the dangers Warfighters were facing in the contemporary operating environment. The MET, which properly trains Soldiers to egress from a rolled-over MRAP vehicle, proves to be an Army solution for an Army problem. Real-world operational needs also prompted the rapid fielding of the Medical Simulation Training Centers, state-of-the-art trainers where Soldiers learn basic combat casualty care in a classroom and simulated battlefield environment. PEO STRI also fielded the Vcommunicator Mobile devices to the deployed Soldiers in Iraq and Afghanistan. These iPOD-based language and cultural translators are currently allowing these Soldiers to more effectively engage with the local Iraqi and Afghani population. Warfighters around the globe are be positively impacted by PEO STRI's recent undertakings. Enabling the Soldier with training is strong; working in collaboration with other Army components and the joint community to provide unsurpassed support to the Warfighter is Army Strong!

Year in Review

- **More than $3 billion in contracting and business operations**
- **Workforce of 1,200 military, civilian and industry personnel**
- **Approximately 335,000 training systems fielded to 600 sites worldwide**
- **Acquisition Center manages 1473 contracts valued at $14.5 billion**
- **Foreign Military Sales supports 49 countries worldwide**

PEO STRI Supports Warfighters Conducting Overseas Contingency Operations

Nearly all Warfighters deployed to a theater of combat operations have trained on a PEO STRI-derived device. Some of these training aids and simulations include the Training Improvised Explosive Device, Engagement Skills Trainer 2000, Laser Marksmanship Training System, Mobile Military Operations on Urban Terrain, Aviation Combined Arms Tactical Trainer, Call for Fire Trainer and Medical Simulation Training Centers.

Table of Contents

PUBLISHER'S NOTE

KMI Media Group, publisher of *Military Training Technology*, produced the 2010 PEO STRI Catalog. *Military Training Technology*, which publishes six-times per year, reports on a wide range of training and simulation issues. The Rockville, MD company also publishes *Military Advanced Education*, *Geospatial Intelligence Forum*, *Military Information Technology*, *Military Logistics Forum*, *Military Medical/CBRN Technology*, *Military Space & Missile Forum*, *Special Operations Technology* and *U.S. Coast Guard Forum*. Content of this Catalog was compiled by PEO STRI. This catalog was designed by PEO STRI Graphics Department.

The appearance of advertisements in the Catalog does not constitute endorsement by the Program Executive Office for Simulation, Training & Instrumentation. PEO STRI does not exercise any editorial control over the advertisements in the Catalog.

KMI MEDIAGROUP
15800 Crabbs Branch Way,
Suite 300
Rockville, MD 20850-2604
Telephone: (301) 670-5700
Fax: (301) 670-5701
Website: www.mt2-kmi.com

CSG

PEO STRI Customer Support Group

Introduction

The mission of the Customer Support Group (CSG) is to provide customer advocacy that advances the global awareness and access to PEO STRI's capabilities for the Warfighter and the Nation. For those Army, joint, other service, interagency and international customers, as well as industry partners, the CSG provides an entry point for ease of navigation within the organization to acquire information, meet needs and obtain support. In order to accomplish this mission, the CSG is organized into three business units: the Warfighter Outreach Office (WOO), the Acquisition Support Office (ASO) and the International Programs Office (IPO). The CSG is staffed with highly experienced professionals in the disciplines of program development, program management, customer relationship management and international affairs. These professionals remain engaged to ensure customers receive the best that PEO STRI has to offer across the full spectrum of available products, services and capabilities.

Warfighter Outreach Office (WOO)

DESCRIPTION

The WOO is an externally-focused organization, reaching out to Army MACOMs, other PEOs, installations and units, as well as joint and other service and interagency activities. Potential customers are assigned a Customer Advocate who listens and investigates needs, identifies potential solutions and support, and connects the customer with the appropriate PEO STRI element. The Customer Advocate remains a part of the customer/PEO STRI team until a satisfactory outcome is achieved. For industry partners, the WOO provides the Technical and Industrial Liaison Office (TILO) function (see page 125), a critical activity that enhances PEO STRI's awareness of existing and emerging industry capabilities that can support the Warfighter and the Nation.

Acquisition Support Office (ASO)

DESCRIPTION

The ASO is an organization, staffed with experienced acquisition and program management professionals, that works with customers early on to explore and identify the optimum acquisition approach and available contractual vehicles to minimize acquisition lead times. The ASO also serves as the custodian of PEO STRI's Omnibus Contract II (STOC II), developing innovative process and eBusiness front-end tools to reduce the burden and time required to get customer requirements on this premier contract vehicle. In support of the overall CSG mission to enhance awareness of PEO STRI capabilities, the ASO contains an Events Management Office element that leads PEO STRI's participation in exhibits, conferences and events across the country and around the world.

International Programs Office (IPO)

DESCRIPTION

The function of the IPO is to enhance allied and coalition partners' capabilities in support of national security and foreign policy objectives. Towards these ends, highly-trained and experienced Army international affairs professionals execute a robust Foreign Military Sales (FMS) program, developing and managing FMS cases that result in the delivery of PEO STRI products, services and capabilities around the globe. In addition, the IPO develops and oversees international armaments cooperation activities and collaborative research and development efforts with key allies that increase interoperability and reduce total development and life-cycle costs to both sides. Industry requests for export licenses of PEO STRI-related products and services are also reviewed within the IPO to ensure protection of critical technologies while allowing U.S. industry to export those technologies that support U.S. interests abroad.

Summary

Through the offices and activities described above, the CSG plays an essential role in carrying out and strategically expanding the mission of PEO STRI both domestically and internationally. Through customer advocacy, acquisition support and international activities, the CSG demonstrates commitment to ensuring customer satisfaction and providing the best PEO STRI has to offer.

Please contact us at 407-384-3773 or by e-mail: customersupport@peostri.army.mil for more information.

PARC

PEO STRI Acquisition Center

Mission

To provide sound business advice and tailored contracting and acquisition solutions to acquire a variety of products and services managed by PEO STRI in support of the U.S. Army and the Nation.

Vision

To serve as an Acquisition Center of Excellence that focuses on customer satisfaction, promotion of innovative and flexible business practices, calculated risk-taking, partnering with industry while emphasizing diversity in the workforce and professional development. As a result of PEO STRI being granted the Head of Contracting Activity (HCA) authority for the Army's simulation, training and instrumentation programs, the Acquisition Center of Excellence was established to manage and execute all contracting functions. To assist the HCA with the additional responsibilities, a Principal Assistant Responsible for Contracting (PARC) was designated in order to lead the contracting functions of PEO STRI. Although there are numerous contractual vehicles available, the three notable contracts that provide a stable of highly-qualified contractor workforce and are pivotal in PEO STRI's mission to support the Warfighter are the Simulation and Training Omnibus Contract (STOC II), the Warfighter Field Operations and Customer Support Contract (Warfighter FOCUS) and the Systems Engineering and Technical Services (SETA) Contract.

Simulation and Training Omnibus Contract (STOC II)

Awarded in January 2009, STOC II provides the Warfighter with the next generation of simulation and training devices to meet the challenges of the joint operational environment. STOC II is not only a continuation but an evolution of its predecessor, STOC I. The omnibus contracting vehicle awarded a total of 142 contracts spread over two lots: Lot I, Full & Open Lot (consisting of small and large businesses), and Lot II, Small Business Set-Aside. These awards resulted in multiple-award indefinite delivery/indefinite quantity contracts that will provide troops with simulation, training and instrumentation products and services beginning with concept development and continuing through life-cycle support.

Warfighter Field Operations Customer Support Contract (Warfighter FOCUS)

Warfighter FOCUS is a contract that fully integrates the live, virtual and constructive training services at Army installations worldwide. As the Army continues to field an increasing

Warfighter Field Operations Customer Support Contract (Warfighter FOCUS)

(Continued)

number of interoperable training systems, the Warfighter FOCUS contract provides a fully-integrated contractor workforce to operate and maintain them. Furthermore, the contract will allow PEO STRI to provide a more rapid response to Department of the Army requests.

Systems Engineering and Technical Assistance Services (SETA) Contract

An indefinite delivery/indefinite quantity contract for SETA services was awarded in August 2009, with a period of performance of five years (basic and options). The SETA contract provides systems engineering and technical support services for PEO STRI and other federal agencies worldwide. The services include activities in support of all aspects of providing responsive integrated and interoperable infrastructure for simulation, training, testing, and instrumentation solutions and acquisition services for the Warfighters and the Nation.

OSBP

PEO STRI Small Business Programs

Small Business Office Mission

The mission of the Office of Small Business Programs (OSBP) is to support our Nation's Warfighter by serving as an advisor to the PEO, DPEO and staff members on issues impacting federal small business programs. The office advocates for small business enterprises, and it develops and implements strategies that provide maximum procurement opportunities to small businesses while supporting PEO STRI's contracting mission.

Program Areas

- Small Business
- Small Disadvantaged Business/Small Business Administration Section 8(a)
- Woman-Owned Small Business
- Veteran-Owned Small Business
- Service-Disabled Veteran-Owned Small Business
- Historically Underutilized Business Zone (HUBZone)
- Historically Black Colleges & Universities and Minority Institutions (HBCU/MI)
- Subcontracting

Contact Information

To learn more about PEO STRI's small business programs and contract opportunities contact:

Office of Small Business Programs
13501 Ingenuity Drive
Suite 248
Orlando, Florida 32826
(407) 384-3656/(407) 384-3517

//PM CATT SIMULATORS

EST 2000 (Right): Urban Combat Scenario using the Engagement Skills Trainer 2000.

RCTS (Next Page): Employing the Buffalo interrogator arm as part of the Route Clearance Training System.

CDT MRAP (Below): Driver training using the MRAP Common Driver Training System.

PUTTING THE POWER OF SIMULATION

INTO THE HANDS OF THE WARFIGHTERS

Introduction

The Project Manager Combined Arms Tactical Trainers (PM CATT) manages the development, acquisition, fielding and life-cycle support of the virtual synthetic environment and associated Training Aids, Devices, Simulators and Simulations (TADSS) to support individual, institutional and collective training. CATT refers to a group of high-fidelity, interactive, manned simulators; command, control and communications workstations; exercise control stations; after action review systems; and the virtual combined arms synthetic environment used to support virtual training up to battalion/task force level. CATT's virtual synthetic environment includes large-scale virtual terrain representations with synthetic natural environment effects and accredited Computer Generated Forces (CGF) that replicate adjacent, supporting and opposing forces (Combat, Combat Support and Combat Service Support elements).

PM CATT

Project Manager Combined Arms Tactical Trainers

Product Manager Air and Command Tactical Trainers (PM ACTT)

Additional Blackhawk Flight Simulator (ABHFS)

MISSION

To provide Army aviators with state-of-the-art flight simulators allowing them to train for basic, advanced, emergency and instrument flight maneuvers.

DESCRIPTION

The ABHFS program includes the development and fielding of three new UH-60 A/L flight simulators to train individual and crew tasks to standard. Devices were fielded to Fort Drum, NY, Eastern Army National Guard Aviation Training Site and Western Army National Guard Aviation Training Site. The new simulators include a full-motion system, a 200 x 45 field-of-view cross-cockpit panorama display, five high-resolution projectors, collimated chin windows, high-performance image generators, night vision goggle compatibility, high-fidelity blade element flight models, fully replicated flight controls, complete Lift Simulation Modernization Program (LSMP) database compatibility for Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) databases, enhanced Instructor Operator Station and aircraft avionics concurrency. Additional capabilities include portable flight planning software integration, Semi-Automated Forces threat environment, new IFR databases, training debrief capability and simulation training exercise planning software.

AH-64A Apache Distributed Mission Operations (ADMO)

MISSION

To demonstrate the Distributed Mission Training (DMT) capability over the U.S. Air Force (USAF) Distributed Mission Operations Network (DMON).

DESCRIPTION

The ADMO is a multi-phase research and development program, which provides U.S. Army and Air Force attack aircraft pilots with a means of training for Joint Close Air Support (JCAS) missions. This training capability develops the skills needed to conduct coordinated attacks on enemy targets. Phase I demonstrated Joint Air Attack Team training (JAAT) with an AH-64A CMS at the Western Army National Guard Aviation Training Site (WAATS) and an Air Force F-16C simulator at the Air Force Research Lab (AFRL) in Mesa, AZ. Phase II networked two AH-64A CMS simulators at Eastern Army National Guard Aviation Training Site (EAATS) and WAATS and two F-16C simulators at AFRL demonstrating coordinated JCAS target engagements. Current ADMO objectives include participation in Combat Air Force (CAF) DMO Events and Warfighter FOCUS Events. A Distributed Scenario Generation Lab (DSGL) is being developed to capture current AH-64A pilot experience and to disseminate real-world scenarios via DMON to networked simulator sites.

AH-64A Combat Mission Simulator (CMS)

MISSION

To enable Apache crews to develop tactical decision-making skills during realistic mission scenarios in a high-threat environment against interactive targets.

DESCRIPTION

The AH-64A CMS is a two-cockpit system with separate cockpits for the pilot, the co-pilot/gunner and on-board instructor operator stations. It provides transition and refresher training for experienced aviators in Nap-of-the-Earth flight, engagement techniques, weapons systems operation and aircraft survivability equipment. The six-degrees-of-freedom motion system utilizes 60-inch hydraulic actuators. The CMS was recently upgraded with the latest simulation technology available in the commercial market.

ABHFS

AH-64A

Aviation Combined Arms Tactical Trainer (AVCATT)

MISSION

To provide a collective training system to meet aviation training requirements and to support institutional, organizational and sustainment training for active and reserve Army aviation units worldwide in combined arms collective training and mission rehearsal.

DESCRIPTION

AVCATT is a mobile, transportable, multi-station virtual simulation device designed to support unit collective and combined arms training. AVCATT provides six man modules, re-configurable to any combination of attack, reconnaissance, lift and/or cargo helicopters. AVCATT is a mobile system that provides training for active and reserve component aircrews deploying in support of Overseas Contingency Operations. Ongoing updates to AVCATT include a visual re-architecture, classified operations and the adoption of One Semi-Automated Forces (OneSAF). AVCATT is interoperable with a variety of simulators including the Close Combat Tactical Trainer (CCTT), the Virtual Combat Convoy Trainer (VCCT), the CCTT Reconfigurable Vehicle Simulator (RVS) and the Reconfigurable Vehicle Tactical Trainer (RVTT).

AVCATT

Basic Electronics Maintenance Trainer (BEMT)

MISSION

To support critical electronics training for the Armament Maintenance Military Occupational Specialties (MOS) trained at 11 Army institutions.

DESCRIPTION

The BEMT is a commercial product used to teach electronics theory. The core of the system is a console with an associated circuit

AVCATT

Basic Electronics Maintenance Trainer (BEMT) *(Continued)*

card set to provide instruction in a multitude of specialties including basic electric motors, industrial controls, fiber optics, power supplies, network architectures, automotive electronics, avionics, radio communications and advanced programmable logic control. The systems include representations of digital Test Measurement and Diagnostic Equipment (TMDE). In addition, when used with the appropriate software, the system can be set up to permit self-paced instruction in the classroom.

Engine Room Simulator (ERS)

MISSION

To provide training to ships' crews and officers from entry level to chief engineer.

DESCRIPTION

The ERS, which consists of a fully integrated system of commercial off-the-shelf (COTS) hardware and software, provides Army watercraft engineers with real-time, man-in-the-loop simulation training to Army doctrinal standards. The ERS integrates computer-based simulation with vessel-specific, three-dimensional, physically-interactive simulation/stimulation components. The ERS meets the needs of the U.S. Army Transportation School for initial and sustainment training on the marine engineering systems and components of the Theater Support Vessel, Logistic Support Vessel, Landing Craft Utility 2000 and Large Tug.

Lift Simulator Modernization Program (LSMP)

MISSION

To provide Army aviators with concurrent state-of-the-art flight simulators, allowing them to train for basic, advanced, emergency and instrument flight maneuvers.

DESCRIPTION

The LSMP is a concurrency and technology refresh program for all UH-60A/L and CH-47D Flight Simulators (FS) modernizing visual and computer equipment and incorporating aircraft concurrency upgrades. Capabilities that were implemented at all FS locations during the LSMP program included new visual terrain databases with geo-specific local instrument gaming areas, full operational capability for the ARC-220 radio, an Uninterruptible Power Supply (UPS) and power conditioning capability. CH-47D FS received a new host computer, additional visual channels to support continuous

chin windows, additional visual animations and Full Authority Digital Engine Control malfunctions. UH-60 FS received new cockpit out-the-window monitors and chin windows.

Shadow Crew Trainer (SCT)

MISSION

To provide sustainment and proficiency classroom/desktop training for every member of the Shadow platoon.

DESCRIPTION

The SCT is a mission simulator that provides platoon level sustainment training for the lightweight, rapidly deployable, short-range airborne reconnaissance system that gives the Battlefield commander a day/night multi-sensor intelligence collection system. The SCT provides training positions for the air vehicle operator, payload operator, launch and recovery crew, staff/leader station, instructor operator station and interactive multimedia instruction.

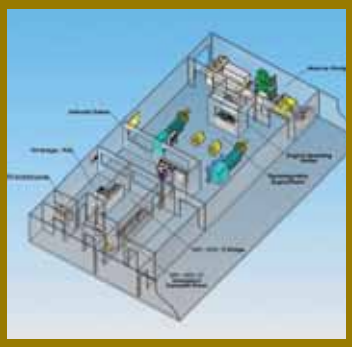
Virtual Battlespace 2: US Army (VBS2)

MISSION

To field and support an Army-wide, game-based training system that provides the Warfighter with a platform to train small unit tactics, techniques and procedures in a contemporary operational environment.

DESCRIPTION

VBS2 is a commercial-off-the-shelf game-based training platform, incorporating a high-fidelity virtual environment, scenario and mission editors, after action review and a powerful development suite. Soldiers move in a shared, immersive, first-person environment that supports mounted and dismounted operations. The system provides ground and air vehicles, small arms and vehicle-mounted weapons, communications, and interactive opposing forces of the contemporary operational environment, including improvised explosive devices. Warfighters learn to anticipate and respond to tactical situations by practicing existing and developing tactics, techniques and procedures. Trainers and leaders use VBS2 to rehearse tactical missions and conduct after after reviews of training sessions using easy-to-use authoring tools integrated in the simulation.



ERS

SCT

SCT

VBS2

PM CATT

Project Manager Combined Arms Tactical Trainers

Close Combat Tactical Trainer (CCTT)

MISSION

To provide armor, mechanized infantry, cavalry and recon crews, units and staffs with a virtual, collective training capability.

DESCRIPTION

The CCTT supports training of armor, mechanized infantry, cavalry units and recon units from platoon through battalion/squadron echelon, including the staff. The primary training audience operates from both full-crew simulators and mock-up or real command posts. Simulators have sufficient fidelity for individuals and crews to accomplish their collective missions. Simulators replicate the Abrams and Bradley Fighting vehicles and selected tactical wheeled vehicles through the use of the Reconfigurable Vehicle Simulator (RVC) and the Reconfigurable Vehicle Tactical Trainer (RVTT). The system is equipped with the latest Force XXI Battle Command Brigade-and-Below (FBCB2) in support of training the digital force. A combination of tactical and simulated equipment located in mock-up command posts or real command posts provides artillery, mortar, combat engineers and logistics units a link to training in the synthetic battlefield. Semi-automated forces workstations provide additional supporting units (i.e., aviation and air defense artillery) and all opposing forces within the battlefield. Thus, while maneuver units (combat crews and battalion-level staff members) constitute the CCTT's primary training audience, all battlefield operating systems are represented in the simulation. This ensures effective simulation within a combined arms training environment that encompasses daylight, night and fog conditions. Mobile versions of CCTT are fielded to the Army National Guard and U.S. Army units. CCTT is interoperable with the Aviation Combined Arms Tactical Trainer and is moving towards being Synthetic Environment Core compliant.

Product Manager Ground Combat Tactical Trainers (PM GCTT)

Advanced Gunnery Training System (AGTS)

MISSION

To develop and sustain individual, crew and platoon precision gunnery skills to a level of proficiency that permits transition to live-fire training or combat gunnery.

DESCRIPTION

The AGTS is a family of gunnery training simulators for vehicle commander/gunner teams for M1A2 System Enhanced Package (SEP), M1A2, M1A1, M1A1 SA, M1A1 FEP and LAV-25 vehicles. It is rapidly transportable and deployable and features a high-fidelity

crew compartment replicating the vehicle's turret and fire control system in both physical and functional aspects. The AGTS presents the vehicle commander and gunner with a full range of simulated engagement situations. The system trains both fully-operational and degraded-mode gunnery techniques under a wide variety of conditions. The pre-programmed, computer-controlled exercises vary in target type and number, range, vehicle and target motion, and visibility. The AGTS-based systems are capable of networking to provide section, platoon and company collective gunnery training. An after action review capability is provided for exercise management and conducting AARs.

CCTT

Abrams Maintenance Training Systems (MTS)

MISSION

To provide skill-level development for system operation, fault diagnosis, troubleshooting, adjustments, removal/replacement and repair tasks for armament and vehicle maintenance Military Occupational Specialty Soldiers.

DESCRIPTION

The MTS is a suite of devices that provides maintenance training capabilities to the institution. It is composed of Diagnostic and Troubleshooting Trainers (DTT) in addition to hands-on and part-task trainers. DTT lessons are completed on a desktop computer station and provide a virtual view of each maintenance task. These lessons can be repeated with hands-on and part-task devices.

CCTT

Avenger Table-Top Trainer (TTT)

MISSION

To train gunners to detect, acquire, identify and engage enemy aircraft and ground targets on a realistically simulated battlefield.

DESCRIPTION

The TTT is a deployable gunnery trainer that can be used for initial and sustainment gunnery training. It simulates firing the Avenger Stinger anti-aircraft missiles and the Bradley 25mm cannon. The Avenger TTT has been used in theater for Overseas Contingency Operations.

AGTS

Bradley Advanced Training System (BATS)

MISSION

To simulate the functionality of the M2A3 Bradley Fighting Vehicle system and to train and sustain the crew's ability to perform critical gunnery skills required for direct-fire engagements.

DESCRIPTION

BATS is a precision gunnery system for the M2A3 Bradley Fighting Vehicle. It is comprised of a crew station, an instructor/operator station and a remote monitoring station. BATS includes a high-fidelity crew station and accurately replicates the commander and gunner positions within the vehicle. The system provides precision and degraded-mode gunnery simulation training. BATS enables digital communications with Force XXI Battle Command Brigade-and-Below functionality in the crew station. Latest updates include Urban Operations (UO) exercises.

Bradley Maintenance Training System (MTS)

MISSION

To provide skill-level development for system operation, fault diagnosis, troubleshooting, adjustments, removal/replacement and repair tasks for armament and vehicle maintenance Military Occupational Specialties Soldiers.

DESCRIPTION

The MTS is a suite of devices that provides a maintenance training capability to the institution. It is composed of Diagnostic and Troubleshooting Trainers (DTT) in addition to hands-on and part-task trainers. DTT lessons are completed on a desktop computer station and provide a virtual view of each maintenance task. These same lessons can be repeated with hands-on and part-task devices.

Common Driver Trainer (CDT)

MISSION

To provide initial and sustainment driver training at operational units and training installations for the Stryker, Abrams and MRAP family of vehicles.

DESCRIPTION

The CDT consists of a simulated vehicle cab, instructor/operator station, after action review (AAR) station, visual system, six degrees-of-freedom motion system and a computational system. Via the instructor/operator station, the

instructor is capable of selecting a visual scene, viewing the scene, introducing malfunctions and emergency control situations, monitoring each trainee's performance and providing recorded AAR feedback. The reconfigurable common platform will allow driver training for various U.S. Army tactical vehicles. The Stryker Driver Trainer is the baseline of the CDT architecture.

Engagement Skills Trainer (EST) 2000

MISSION

To simulate weapon-training events that lead to live-fire individual/crew weapon qualification and other weapon-training events/activities.

DESCRIPTION

The EST 2000 provides initial and sustainment marksmanship training, static unit collective gunnery and tactical training, and shoot/don't shoot training. It supports the following three modes of training: marksmanship, squad/fire team collective and judgmental use of force. The system models 11 small arms and is deployable with its own system shelter. All EST 2000 training scenarios are U.S. Army Training and Doctrine Command (TRADOC) validated.

Fire Support Combined Arms Tactical Trainer (FSCATT)

MISSION

To exercise the artillery gunnery team in realistic fire missions with a reduction in expenditure of ammunition and related operational costs.

DESCRIPTION

The FSCATT was developed as a high-fidelity simulator that enables the training of M109A5/A6 howitzer crews, Fire Direction Center (FDC), Platoon Operation Center (POC) personnel and Forward Observers (FO). The system has the following three modes of operation: stand-alone, interactive and closed-loop. The stand-alone mode allows each element (Howitzer Crew, FDC and FO) to train independently. The interactive mode links the FDC and the Howitzer Crew Trainer (HCT). The closed-loop mode is the interaction of the HCT, FDC and the FO nodes under the control of the closed-loop controller. FSCATT simulates all functions of M109A5/A6 self-propelled howitzers. It provides training for the entire gunnery team in stand-alone, interactive and closed-loop modes.

BATS

BRADLEY MTS

EST 2000

FSCATT

High-Mobility Artillery Rocket System (HIMARS) Maintenance Training System (MTS)

MISSION

To provide skill-level development for system operation, fault diagnosis, troubleshooting, adjustments, removal/replacement and repair tasks.

DESCRIPTION

HIMARS MTS is a suite of devices that provides maintenance training capability to the institution. It is composed of Diagnostic and Troubleshooting Trainers (DTT) in addition to hands-on and part-task trainers. DTT lessons are completed on a desktop computer station and provide a virtual view of each maintenance task. These same lessons can be repeated with hands-on and part-task devices.

High-Mobility Multi-Wheeled Vehicle (HMMWV) Egress Assistance Trainer (HEAT)

MISSION

To provide training to Soldiers on the effects of rollover and to conduct drills that will provide the skills to react properly during a rollover and/or egress situation in an up-armored HMMWV.

DESCRIPTION

The HEAT increases the situational awareness of vehicle rollover by permitting the instructor to observe driver performance and reaction to emergency conditions without requiring the use of an actual vehicle. The device reinforces the importance of seat positioning, wearing seatbelts, demonstrating the feeling of being disoriented and the actual effort required to execute rollover procedures. The trainer allows individuals and crews to rehearse and physically execute the necessary steps required to survive a vehicle rollover.

Laser Marksmanship Training System (LMTS)

MISSION

To simulate weapons-training events that lead to live-fire qualifications for individual and crew weapons.

DESCRIPTION

The LMTS is a commercial-off-the-shelf laser marksmanship training system that supports the Army's marksmanship training strategy. Since it

is light, transportable, uses self-sustained power or power from a vehicle and requires no fixed facilities support, it is ideal for training scenarios in the field during the day or at night. LMTS accommodates numerous weapons and calibers to include the following: M9 pistol, M16 and M4 rifles, and M249, M240 and M2 machine guns. It uses the individual Soldier's personal weapon, optics and accessories. LMTS allows units to conduct individual and sustainment marksmanship training using nuclear, biological and chemical equipment.

HIMARS MTS

HEAT

LMTS

RCTS

Route Clearance Training Services (RCTS)

MISSION

To instruct route clearance operations, improve Soldier route clearance skills, teach the latest tactics, techniques and procedures for route clearance, and practice how to employ the new route clearance vehicles: Mine Protected Clearance Vehicle (MPCV) ("Buffalo"), Vehicular Mounted Mine Detector (VMMD) ("Husky") with the Mine Detonation Trailer (MDT), Medium Mine Protected Vehicle (MMPV) ("RG31/33 and JERRV"), and the Man Transportable Robotic Systems (MTRS) ("Talon"). RCTS will remain a stop-gap training tool until the U.S. Army completes the planned acquisition of a program of record TADSS requirement.

DESCRIPTION

RCTS Phase I utilizes two self-contained mobile trailers containing: four Buffalo simulators (driver and co-driver positions), two Husky simulators virtually represented visually/physically using the Buffalo simulator as a Husky, two RG-31 simulators (driver, commander, gunner positions), instructor operator station with an after action review capability. RCTS provides classroom instruction and a mobile virtual simulator environment that is owned, operated and maintained by the contractor. The vehicle simulators are networked for collective route clearance mission training and can also provide individual skill training. The simulator incorporates the actual MPCV arm control box, MPCV arm camera control box and camera view select box. The RG-31 simulator also incorporates the M2 crew-served weapon; metal detection and marking system capability is incorporated for the Husky. The instructor can also modify scenario conditions and events such as improvised explosive device explosions in real time allowing flexibility in training. The RCTS Phase II will consist of eight additional RCTS suites with additional or the same capabilities as the initial VRCT.

Stryker Maintenance Training System (MTS)

MISSION

To provide skill-level development for system operation, fault diagnosis, troubleshooting, adjustments, removal/replacement and repair tasks for armament and vehicle maintenance Military Occupational Specialties Soldiers.

DESCRIPTION

Stryker MTS is a suite of devices that provides maintenance training capability to the institution. It is composed of Diagnostic and Troubleshooting Trainers (DTT) in addition to hands-on and part-task trainers. DTT lessons are completed on a desktop computer station and provide a virtual view of each maintenance task. These same lessons can be repeated with hands-on and part-task devices. The system utilizes the actual vehicle Interactive Electronic Technical Manual to support training tasks.

Stryker Mobile Gun System (MGS) Advanced Gunnery Training System (AGTS)

MISSION

To develop and sustain individual, crew and platoon precision gunnery skills to a level of proficiency that permits transition to live-fire training or combat gunnery.

DESCRIPTION

The MGS AGTS is a gunnery training simulator for vehicle commander/gunner teams for the Stryker MGS vehicle. It is rapidly transportable and deployable and features a high-fidelity crew compartment replicating the vehicle's turret and fire control system in both physical and functional aspects. The MGS AGTS presents the vehicle commander and gunner with a full range of simulated engagement situations. The system trains both fully-operational and degraded-mode gunnery techniques under a wide variety of conditions. The pre-programmed, computer-controlled exercises vary in target type and number, range, vehicle and target motion, and visibility. The MGS AGTS-based system is capable of networking to provide section, platoon and company collective gunnery training. A pre-brief after-action review capability is provided for exercise management and conducting AARs.

Stryker Mobile Gun System (MGS) Interim Deployable Advanced Gunnery Training System (IDAGTS)

MISSION

To provide an interim gunnery simulation training capability in a virtual environment for Stryker Mobile Gun System (MGS) crews.

DESCRIPTION

The Stryker MGS IDAGTS replicates the vehicle commander and gunner crew stations and controls providing them the capability to develop individual and crew gunnery skills. IDAGTS provided an interim step towards development of the MGS Advanced Gunnery Training System (AGTS) full-fidelity crew trainer. It leveraged proven M1A2 Abrams tank AGTS software, databases and visual models while allowing the MGS crew to train basic gunnery tasks and gate exercises in precision mode. IDAGTS contains a progression matrix to help meet the requirements of the advanced gunnery tables. The system uses the Arab Military Operations on Urban Terrain (MOUT), desert and Korean terrain databases and allows free movement in the Arab MOUT database.

STRYKER MGS AGTS

STRYKER MGS IDAGTS

Virtual Combat Convoy Training (VCCT) Services

MISSION

To rapidly provide combat convoy operations training using the VCCT Services as an interim training solution until the Reconfigurable Vehicle Tactical Trainer (RVTT) program of record is fielded. The VCCT Services train HMMWV crews to identify improvised explosive devices, to identify and avoid an ambush, to return fire, to maneuver and to react appropriately in the contemporary operating environment.

DESCRIPTION

The VCCT Services addressed an immediate training need for deploying units. VCCT Services support entry-level training to enhance development of basic-to-advanced combat skills on situations that patrols and convoys frequently encounter in combat, including IEDs, small arms fire and ambushes. The VCCT Services use a self-contained mobile system with four HMMWV vehicle simulators with head-mounted displays that allow a 360-degree field of regard, geo-specific terrain databases incorporated small arms and crew-served weapons, simulated FBCB2 capability, with instances of IEDs being pre-programmed or in-placed during scenarios, personal computer image generators (PC IGs), and an after action review capability. The VCCT Services incorporate training with multiple individuals and crew-served weapons with multiple convoy scenarios, including IEDs training. The VCCT has provided critical convoy training to more than 60,000 Soldiers supporting Operation Iraqi Freedom and Operation Enduring Freedom operations at Camp Buehring, Kuwait, U.S. Army Pacific, U.S. Army Europe, and numerous U.S. locations.

VCCT

VCCT

Medical Simulation Training Centers (MSTC)

MISSION

To conduct standardized combat medical training for medical and non-medical personnel.

DESCRIPTION

MSTC systems are an Army training asset with a regional training requirement located at installations. They deliver effective medical training with a standardized training platform for both classroom and simulated battlefield conditions to better prepare Warfighters for application of medical interventions under combat conditions. The MSTC is a standardized family of supporting component systems with the Virtual Patient System, Instruction Support System, Medical Training Command and Control System, and the Medical Training Evaluation and Review System providing frameworks fitted with reconfigurable enabling technology and supporting training devices.

Synthetic Environment Core (SE Core)

MISSION

To enhance the training and mission rehearsal capabilities for our Warfighters to ensure that the Army's virtual simulation systems are fully integrated, interoperable and compatible with live and constructive training systems so that our Warfighters can truly "train as they fight."

DESCRIPTION

SE Core encompasses the Army's overarching strategy of developing virtual simulation systems that help make our Warfighters the best trained in the world. The two primary initiatives under the SE Core program are the Architecture and Integration (A&I) and the Database Virtual Environment Development (DVED). The A&I's primary mission is architecture analysis and development of the Virtual Simulation Architecture (VSA) to provide a Common Virtual Environment (CVE) that links system and non-system virtual simulations into a fully-integrated and interoperable training capability. The VSA utilizes a product line approach that emphasizes systematic reuse and interoperability and provides the foundation and guidelines for developing Common Virtual Components (CVCs). The CVCs will enable plug-and-play operation and will be designed to provide common training elements for use within the Army's virtual simulation domain. Through commonality, the VSA and CVCs will reduce future development and life-cycle costs. In addition, A&I is integrating the U.S. Army's One Semi-Automated Forces (OneSAF) into both the Close Combat Tactical Trainer (CCTT) and the Aviation Combined Arms Tactical Trainer (AVCATT) systems. DVED's primary mission is to rapidly generate correlated simulation system runtime databases for supported simulation systems. A master SE Core database is populated from a union of multiple authoritative data sources by using a DVED-defined software architecture, processes and a suite of commercial and government-off-the-shelf

Synthetic Environment Core (SE Core) *(Continued)*

database development software tools. The DVED architecture and tools will enable the generation of master SE Core databases in hours or days vice months. The DVED effort will also develop common virtual vehicle models, common virtual sensor simulation software and virtual simulation components. With SE Core as the foundation, the Army will leverage existing virtual simulation systems as well as expand the overall use of virtual simulation within live, virtual and constructive environments to support ongoing Army transformation.

MSTC

Product Manager Special Operations Forces Training Systems (PM STS)

Call for Fire Trainer (CFFT) Increment II

MISSION

To provide observed fire training in support of all fire support missions.

DESCRIPTION

The CFFT is a lightweight, rapidly deployable, observed fire-training system that provides simulated battlefield environments for instructing fire support specialists, joint fires observers and Soldiers at the institutional and unit level. The CFFT is capable of training Artillery, Type II and III Close Air Support, Naval Gunfire and Mortar Missions. It is fielded in three configurations: the 1:30 (one instructor to 30 students), 1:12 and 1:4. The 1:12 and 1:4 system configurations are deployable. Increment II systems are certified for networked operations with other simulators in classified environments and are fully interoperable with AFATDS. Near term enhancements will fully integrate SE Core and OneSAF and leverage capabilities developed for the Joint Fires and Effects Trainer System through use of the JFPL architecture. These include high-fidelity, immersive visual displays for the institution and helmet-mounted displays, voice communications, C4ISR capabilities (i.e. ROVER), and improved after action review for the operational force.

SE CORE

CFFT

Joint Fires Product Line (JFPL)

MISSION

To promote widespread adoption throughout the joint community of a well-documented software architecture and reusable core assets that promote synergy, collaboration and a common training solution for all fires virtual training devices.

DESCRIPTION

The JFPL is a family of systems based on documented software architecture with reusable software modules and other core assets. Systems that are part of the JFPL include the Call for Fire Trainer (CFFT), the USSOCOM Joint Terminal Attack Control (JTAC) Trainer to

Joint Fires Product Line (JFPL) *(Continued)*

support portable, classroom and immersive configuration, the JFCOM JTAC Trainer, as well as planned CFFT enhancements and configurations.

MH-47G and MH-60L Combat Mission Simulators (CMS)

MISSION

To provide the 160th Special Operations Aviation Regiment (Airborne) (SOAR(A)) with mission-rehearsal capabilities that are interoperable with other United States Special Operations Command (USSOCOM) systems. The MH-47G and MH-60L Combat Mission Simulators (CMSs) will provide the 160th SOAR(A) aircrews with a real-world, mission-rehearsal capability to practice, validate and verify tactics, techniques and procedures to execute direct missions.

DESCRIPTION

The MH-47G and MH-60L CMS are high-fidelity, full-motion simulators that operate with the latest Special Operations Aviation (SOA) Common Avionics Architecture System (CAAS). They provide correlated sensor simulation, full-flight and aircraft performance replication, and threat and environmental models. These simulators have improved out-the-window and FLIR scenes to support the field-of-view of the aircraft and will be used as mission-rehearsal platforms using the USSOCOM Common Database (CDB). The systems are Distributed Interactive Simulation/ High-Level Architecture (DIS/HLA) compliant for interoperability.

Special Operations Aviation Combat Mission Simulator (SOA CMS) Simulator Block Updates (SBUDs)

MISSION

To provide the 160th Special Operations Aviation Regiment (Airborne) (SOAR(A)) with high-fidelity training systems for the MH-47E, MH-60K, MH-47G, MH-60L, and A/MH-6M aircraft that support United States Special Operations Command (USSOCOM) requirements; to provide air crews a real-world capability to practice, validate and verify tactics, techniques and procedures to support training and mission rehearsal.

DESCRIPTION

The SBUDs program provides the capability to incorporate concurrency, obsolescence and technology upgrades into the aviation systems in a timely and cost-effective manner with minimal impact on training and mission-rehearsal operations. It ensures that the Warfighters are provided training systems that are reliable, technically advanced and concurrent with the operational aircraft.

Special Operations Forces Air Ground Simulation (SAGIS)

MISSION

To provide Special Operations Forces (SOF) with realistic air traffic control and terminal attack control, fire support coordination training, and mission rehearsal.

DESCRIPTION

SAGIS is a modular, scalable system designed to provide training for both U.S. Army and Air Force SOF personnel in indirect fire, close air support and tactical air traffic control missions. SAGIS can operate in a stand-alone mode or in a networked, interoperable mode, connected to other simulators using Distributed Interactive Simulation (DIS) or High-Level Architecture (HLA).

MH-47G CMS

SAGIS

Special Operations Forces Mixed-Reality Digitized Ranges

MISSION

To convert existing special operations 360-degree, live-fire facility shoothouses into a virtual targetry system that allows forces to conduct multi-room, multi-team close quarters combat engaging virtual targets throughout the entire shoothouse.

DESCRIPTION

This capability trains Soldiers in live-fire situations while accurately simulating various combat environments. The system is comprised of video projectors, computers and self-healing screens. It provides a greater student throughput and training versatility against a variety of scenarios and allows virtual enemy combatants to free flow throughout the facility, allowing an assault force to react on animated combatants instead of the standard one corner movement that currently exists within existing shoothouses.

SOF Digitized Ranges

Special Operations Forces Planning, Rehearsal, and Execution Preparation – Support Contract (SOFPREP-SC)

MISSION

To provide contractor support via a services contract to assist in production of GEOINT data and 3D scene visualization databases in support of special operations forces mission training and preparation systems.

Special Operations Forces Planning, Rehearsal, and Execution Preparation – Support Contract (SOFPREP-SC) *(Continued)*

DESCRIPTION

SOFPREP-SC provides support to USSOCOM in the performance of scene visualization generation, distribution, archiving and maintenance via highly sophisticated GEOINT database production centers. SOFPREP-SC provides training and mission rehearsal support for Vital, Medallion-S, TOPSCENE, FLIR, Radar, and SAF databases as well as databases developed in USSOCOM common database 2.1 and 3.0 formats.

Special Operations Forces Training, Engineering and Maintenance Support (SOF TEAMS)

MISSION

To provide SOF TEAMS to 160th Special Operations Aviation Regiment (Airborne) (SOAR(A)) Training Aids, Devices, Simulators and Simulations (TADSS) located at Fort Campbell, KY.

DESCRIPTION

The SOF TEAMS scope is to maintain, troubleshoot, repair, upgrade and modify TADSS in response to user requirements for mission rehearsal, accident investigation, training, TADSS upgrades/updates and other requirements. Additionally, SOF TEAMS provides the following: the addition, deletion and relocation of equipment; performance of technical services in support of hardware, software and network infrastructure modifications; and performance of other site support (e.g., access control, system maintenance, spare and spare parts provisioning, etc.).

United States Special Operations Command (USSOCOM) Common Database (CDB)

MISSION

To improve the realism, performance and interoperability of simulators in support of training and mission rehearsal for the SOF Warfighter.

DESCRIPTION

The USSOCOM CDB will increase correlation and ensure fair fight engagements between SOF simulators. The database layers are derived from the latest CDB 3.0 standard consisting of single,

static synthetic representations of the world for use in full-mission air/ground/maritime simulators. These layers include enough relevant information for all simulator subsystems to perform their respective simulation tasks in order to meet training and mission rehearsal requirements.

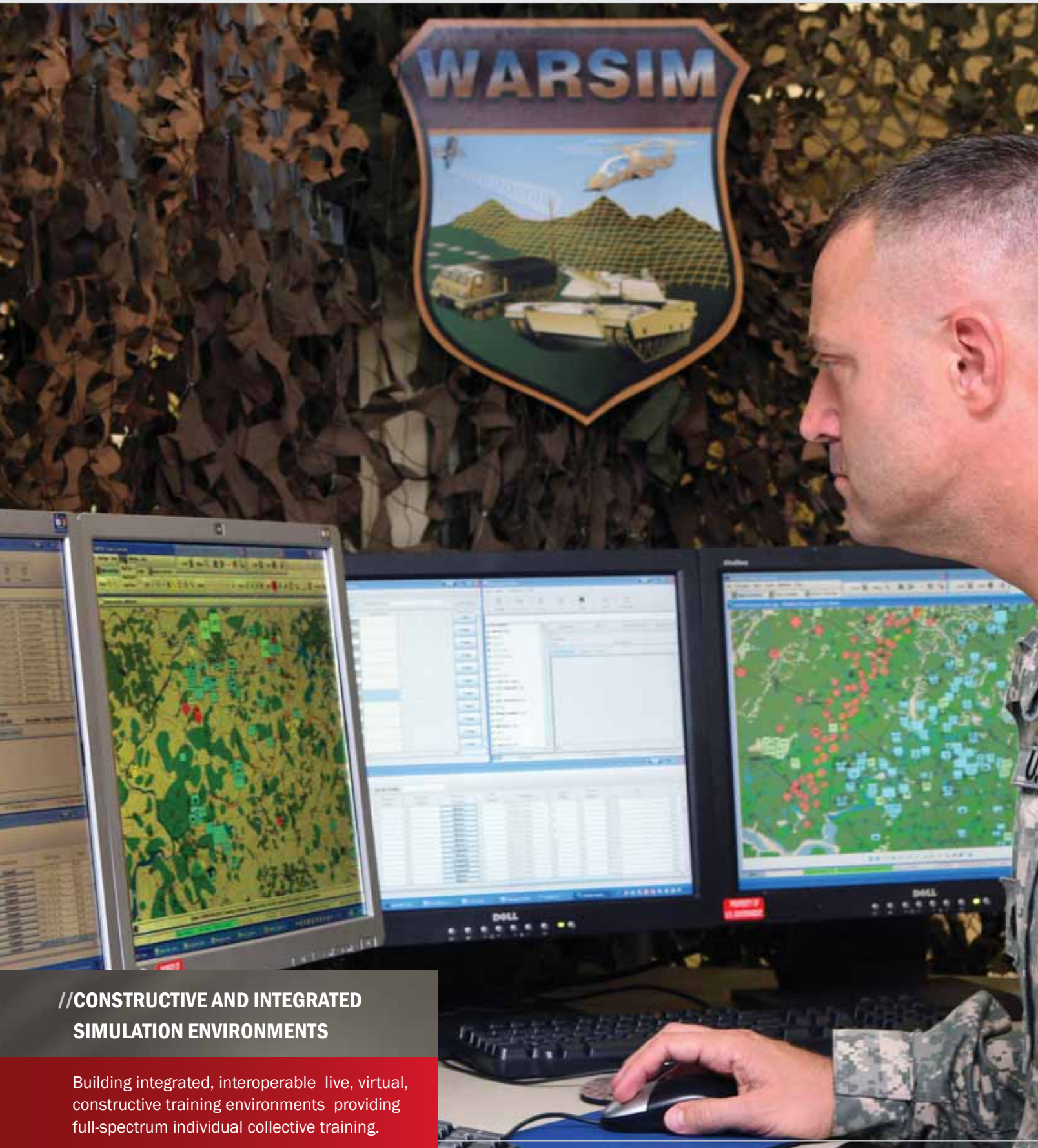
United States Special Operations Command (USSOCOM) Joint Terminal Attack Controller (JTAC) Trainer

MISSION

To provide Terminal Attack Control (TAC) and Fire Support (FS) coordination training and mission rehearsal.

DESCRIPTION

The USSOCOM JTAC Trainer is an interim solution to support all components of USSOCOM and will be fielded to MARSOC, NAVSPECWARCOM and HAVE ACE West. The USSOCOM JTAC Trainer will support all fire missions in portable, classroom and immersive environments utilizing the same core asset software and built from a modular perspective from the same hardware for all configurations.



//CONSTRUCTIVE AND INTEGRATED SIMULATION ENVIRONMENTS

Building integrated, interoperable live, virtual, constructive training environments providing full-spectrum individual collective training.

TRAINING OUR NATION'S WARFIGHTERS

Introduction

The Project Manager Constructive Simulation (PM ConSim) acquires, fields and sustains constructive simulations and integrated simulation environments to support Army Battle Command and Intelligence collective training requirements. Constructive simulations and integrated multi-domain environments are the most effective and efficient means to train commanders and staffs from company to theater level. PM ConSim supports training transformation, ARFORGEN and the modular force providing tailored-made integrated environments for collective training objectives across the full spectrum of military operations.

PM ConSim

Project Manager Constructive Simulation

Program Manager Constructive Simulation (PM ConSim)

VISION

To be the recognized leader for providing constructive and integrated simulation environments.

MISSION

To provide operationally relevant constructive and integrated simulation environments for the Warfighter and the Nation.

Assistant Product Manager ConSim Joint Land Component Constructive Training Capability (APM JLCCTC)

Joint Land Component Constructive Training Capability (JLCCTC)

MISSION

To provide unit commanders and their battle staff the capability to train in a constructive environment from battalion to echelons above corps; to support Army and joint training requirements through a federation of legacy and developing objective systems including Warfighters' Simulation (WARSIM), One Semi-Automated Forces (OneSAF), Corps Battle Simulation (CBS), Tactical Simulation (TACSIM) and the Entity Resolution Federation (ERF).

DESCRIPTION

The JLCCTC is a software modeling and simulation capability that contributes to the joint training functional concept and the Army training mission area by providing the appropriate levels of model and simulation resolution as well as the fidelity needed to support both Army and joint training requirements. The JLCCTC is comprised of two separate federations, JLCCTC-Multi-Resolution Federation (MRF) and JLCCTC-Entity- Resolution Federation (ERF). The MRF is a federated set of constructive simulation software that is supported by commercial software and commercial-off-the-shelf hardware that will support training of commanders and their staffs in maneuver, logistics, intelligence, air defense and artillery. The federate models are connected by a combination of the standard High-Level Architecture (HLA) Run-Time Infrastructure (RTI), Distributed Interactive Simulation (DIS), custom interfaces, the Master Interface (MI) and Point-to-Point (PTP). The JLCCTC-MRF is a Command Post Exercise (CPX) driver designed to train Army commanders and their staffs at division through echelons above corps. The JLCCTC provides the simulated operational environment in which computer-generated forces stimulate and respond to the command and control processes of the commanders and staffs. The JLCCTC models will provide full training functionality for leader and battle staff for the Army and the joint, intergovernmental, interagency and multinational (JIIM) spectrum. The JLCCTC provides an interface to Army Battle Command System (ABCS) equipment allowing commanders and their staffs to train with their go-to-war systems. JLCCTC-ERF is a federation of simulations, simulation Command, Control, Communications, Computers and Information (C4I) interfaces, data collection and after action review tools. It stimulates the

ABCS to facilitate battle staff collective training by requiring staff reaction to incoming digital information while executing the commander's tactical plan. The targeted training audience is comprised of brigade and battalion battle staffs, functional Command Post (CP) training and full CP training. Battle staffs of higher echelons may also employ JLCCTC-ERF to achieve specific training objectives.

JLCCTC

JLCCTC

Common Battle Command Simulation Equipment (CBCSE)

MISSION

To provide Commercial Off-The-Shelf (COTS) hardware and software products in support of the Army's Joint Land Component Constructive Training Capability (JLCCTC) mission requirement to afford unit commanders and their battle staffs the capability to train in a constructive environment.

DESCRIPTION

The program provides commercial-off-the-shelf hardware and software capable of running Army constructive simulations and gaming technology providing Army-wide equipment standardization, commonality and compatibility, as well as sufficient network and computer capacity to operate current and future versions of JLCCTC. The Army relies heavily on its constructive simulations to train commanders and their staffs to support force readiness at more than 40 simulation facilities worldwide. JLCCTC Version 5.1 is fielded and is currently training various organizational echelons. The objective constructive simulation systems are in development and will provide functionality not currently available (digital operations, stability and support operations, information operations. Intelligence collection, improved exercise generation and after action review).

Corps Battle Simulation (CBS)

MISSION

To geographically and functionally distribute an air and land warfare simulation that drives the U.S. Army Battle Command Training Program's (BCTP) Warfighter exercises as well as corps and division command post training exercises for the active Army, National Guard and the Army Reserve.

DESCRIPTION

CBS is a constructive simulation system that portrays ground battle scenarios for theater, corps and division-level training events. CBS models all battlefield operating systems including psychological operations, rotary-wing and fixed-wing operations, logistics and multi-sided play. CBS is the cornerstone of the Joint Land Component Constructive Training Capability (JLCCTC) Multi-Resolution

Corps Battle Simulation (CBS)

(Continued)

Federation (MRF). In the JLCCTC-MRF, CBS is linked with other constructive simulations to provide a realistic presentation of joint battlefield operations. The system can also change its role in the game based on the training requirements and changing conditions on the battlefield.

Logistics Federation (LOGFED)

MISSION

To integrate LOGFED into both the Joint Land Component Constructive Training Capability (JLCCTC)–Multi-Resolution Federation (MRF) and Entity-Resolution Federation (ERF) constructive simulation environments; to provide commanders and their staffs with the necessary tools to cost-effectively conduct the mission planning, rehearsals and training associated with the five phases of power projection operations: mobilization, deployment, employment, sustainment and redeployment.

DESCRIPTION

The Joint Deployment Logistics Model (JDLM) is the logistics component constructive simulation model of the JLCCTC federation. Whether operating in stand-alone mode or in a JLCCTC multi-resolution or entity-level federated environment, JDLM provides commanders and their staffs with the complete array of combat support and combat service support functionality required to meet logistics training requirements. JDLM is currently fielded at several combat support and combat service support schoolhouses and has been used as the constructive simulation logistics exercise driver in several Army and joint exercises.

Tactical Simulation (TACSIM)

MISSION

To provide simulated intelligence collection and reporting through organic user communications and processors; to provide training for intelligence analysts, operators and collection managers; to provide training for commanders and staffs through the use of aggregated products not requiring additional intelligence analysts.

DESCRIPTION

The TACSIM system is designed to provide intelligence training for operators from within the JLCCTC federation staffs. TACSIM is composed of several parts: the main user interface, a remote tasking interface, a TACSIM proprietary interface, an Unmanned Aerial Vehicle visualization and a Multiple UAV Simulation Environment. TACSIM can accept game feeds from an unclassified and U.S. Secret

ground driver (Corps Battle Simulation and Joint Conflict and Tactical Simulation) via its run-time infrastructure interface. TACSIM CDS allows it to operate at two separate security classification levels. When TACSIM is operating, it produces U.S. text messages for distribution. TACSIM can be operated in the stand-alone mode, providing schoolhouse intelligence training to students on specific training objectives. TACSIM can also federate with other models: the Army's Corps Battle Simulation, the Air Force's Air Warfare Simulation, the Navy's Research Evaluation and Systems Analysis, the Marine's Air-Ground Task Force Tactical Simulation and the Joint Electronic Combat Electronic Warfare Simulation.

WARSIM

Warfighters' Simulation (WARSIM)

MISSION

To increase the effectiveness of commander and staff training, exercises and staff mission rehearsals by dramatically improving the realism and the scope of the available training environment; in conjunction with other simulations, to provide a complete operational environment with scenarios covering the full range of military operations within the stages of force projection operations to support the global distributed Army, joint and coalition force task-based training.

DESCRIPTION

WARSIM trains and provides mission-rehearsal capabilities for Army and joint commanders and their staffs during war, conflict and peacetime. WARSIM portrays activities associated with post-employment operations such as war termination and post-conflict operations including restoring order, supplementing civilian government, providing humanitarian assistance, redeployment, reconstitution and demobilization. The simulation accounts for the time and space factors associated with large unit movements (division and corps) as well as the differences between heavy and light units. The simulation allows all units, including combat support and combat service support units, to be committed to combat operations in response to threats in a rear area. The WARSIM system uses a software computer-based simulation and associated hardware to support the planning, decision-making and operational execution of unit commanders and their staffs from battalion through theater level as well as the training events in educational institutions. Designed and built using modern computer technology, modern software engineering techniques and verified and validated algorithms and databases, WARSIM will allow units worldwide to train using their organizational real-world command and control equipment. The system is compliant with the High-Level Architecture (HLA). WARSIM components include:

- Computer-based battle simulation models that portray the operational environment needed to support Army training events
- Software modules to support exercise preparation and scenario generation

Warfighters' Simulation (WARSIM)

(Continued)

- Software modules/databases to support after action review
- Software modules for linking WARSIM to other simulations in order to expand the training environment for Joint force training exercises
- Workstations for use by personnel in an exercise support function

Product Manager One Semi-Automated Forces (PdM OneSAF)

MISSION

To foster interoperability, reuse and meet the modeling and simulation needs of the future force. OneSAF will reduce duplication of investments by eliminating the Army's need for multiple simulations across the Research, Development & Acquisition (RDA); Advanced Concepts and Requirements (ACR); and Training, Exercises and Military Operations (TEMO) M&S domains, servicing Live, Virtual and Constructive applications.

DESCRIPTION

OneSAF is a next generation, entity-level simulation that supports both Computer Generated Forces (CGF) and Semi-Automated Forces (SAF) applications. This enables it to support a wide range of U.S. Army brigade-and-below constructive simulations and virtual simulators. OneSAF is currently being integrated by the SE Core program as the replacement SAF for virtual trainers such as Aviation Combined Arms Tactical Trainer (AVCATT), Close Combat Tactical Trainer (CCTT) and the Common Gunnery Architecture (CGA) and will serve as the basis for subsequent modernization activities for simulators across the U.S. Army. OneSAF was built to represent the modular and future force and provides entities, units and behaviors across the spectrum of military operations in the contemporary operating environment. OneSAF has been crafted to be uniquely capable of simulating aspects of the contemporary operating environment and its effects on simulated activities and behaviors. Special attention has been paid to detailed buildings for urban operations including interior rooms, furniture, tunnels and subterranean features, and associated automated behaviors to make use of these attributes. OneSAF is unique in its ability to model unit behaviors from fire team to company level for all units for both combat and non-combat operations. Intelligent, doctrinally correct behaviors and improved Graphical User Interfaces (GUIs) are provided to increase the span of control for workstation operators. The OneSAF Environmental Runtime Component (ERC) provides a range of terrain database services and capabilities already supporting live, virtual and constructive applications. In addition, interoperability support is present for industry standards such as Distributed Interactive Simulation (DIS), High Level Architecture (HLA), Military Scenario Development Language (MSDL), Joint Consultation Command and Control Information Exchange Data Model (JC3IEDM) and Army Battle

Command System (ABCS) devices. OneSAF, as a cross-domain simulation suitable for supporting training, analysis, research, experimentation, mission-planning and rehearsal activities, provides the latest physics-based modeling and data, enhanced data collection and reporting capabilities. OneSAF provides a domestic release that is available to all U.S. government users and an international version to support non-U.S. requirements. PdM OneSAF also provides a full range of training, development and event support services.

OneSAF

Product Manager Warrior Training Integration (PdM WTI)

Battle Command Training Branch (BCTB)

MISSION

To provide acquisition and contracting support to the III Corps BCTB and its associated sites.

DESCRIPTION

This effort represents a fusion of the Battle Simulations Centers (BSCs) and BCTC capabilities at Forts Hood, Carson, Riley, Bliss, Sill and Knox. This fusion of the BSCs and the BCTC capabilities is henceforth known as the Battle Command Training Branch (BCTB). Under the Army's "hub" and "spoke" strategy, Battle Command Training Capabilities (BCTCs/BCTBs) are the centerpiece of an installation's digital training support strategy and are responsible for supporting all individual, staff, leader and collective digital training within the installation and across all associated spokes. This support is provided to active and reserve component forces as well as to other government agencies as required.

OneSAF

BCTB

Battle Command Training Capability – Equipment Support (BCTC-ES)

MISSION

BCTC-ES provides network, equipment and technical tools that enable the integration of constructive simulations systems, integrates Army Battle Command Systems (ABCS) white boxes into Tactical Operation Center (TOC) sets, provides visualization of the Common Operating Picture (COP) and ensures Sim-C2 system thread functionality. It is the enabling link within a BCTC that supports Joint Land Component Constructive Training Capability (JLCCTC) stimulation. It provides support to the Battle Command Training Center (BCTC) Design Board for new Military Construction, Army (MCA) development.

DESCRIPTION

BCTC-ES tools enable JLCCTC effectiveness by providing the BCTC with an improved ability to integrate constructive simulations with

BCTB

Battle Command Training Capability – Equipment Support (BCTC-ES)

(Continued)

Command and Control (C2) training aligning the training environment to the operational environment. BCTC-ES provides significant battle command capability enablers including:

- Network - Internal BCTC Wide Area Network (WAN), Local Area Network (LAN) additions and distribution to external TOC pads, classrooms, Local Training Areas (LTA) and remote sites
- Radio-Wire Integration System (RWIS) – Links constructive player work cells and live TOCs across combat radio nets
- Packet Radio Units (PRU) fixed/mobile - Transmit virtual unmanned aerial vehicle (UAV)s and other data/video between BCTC and untethered TOC
- C2 Servers - Link C2 white boxes into unit and HICON/EXCON TOC sets and interface with mobile operational TOC
- Battlefield Visualization System (BVS) – Tool provides video, Simulations and/or C2 feeds to TOC, Ex. Dir., Simulation Control and AAR room
- Simulation/C2 End-to-End Integration – Tech support team Sim/C2 threads functionality integration ICW JLCCTC fielding or updates to BCTC-ES components are provided individually, as required, and are fully programmed for new MCA BCTC stand-ups
- Architectural & Engineering Support – Subject matter experts planning support for new MCA projects prior to design directive issuance.
- Battery Refresh for computer back-up system - Eight Battle Command Training Centers (BCTC) sites – a five-year refresh cycle
- Combat Training Center (CTC) Battle Command Training Support Program Upgrades – One CTC per year

PEO STRI Digital Integration Laboratory (DIL)

MISSION

The PEO STRI DIL is operated by the Program Executive Office Simulation, Training and Instrumentation and is co-located with the Joint Development Integration Facility (JDIF) at 12000 Research Parkway, Suite 300, Orlando, FL. The Digital Integration Laboratory (DIL) provides resources and services in a centrally-controlled environment for the purpose of supporting the integration of PEO STRI systems and non-system Training Aids, Devices, Simulators and Simulations (TADSS) with existing and emerging battle command systems. The DIL reduces PEO STRI's integration and development cost and enables the timely delivery of level II-V training products in parallel with Army Battle Command Systems while ensuring that PEO STRI products are relevant to emerging Battle Command Baselines.

The DIL supports PEO STRI system and software integration and development activities, conducts Pre-Army Interoperability Certification testing and directly supports formal distributed Army Interoperability Certification in accordance with published Software Blocking Schedules for designated PEO STRI programs.

DESCRIPTION

The DIL augments the mission of the Central Technical Support Facility (CTSF) in supporting the integration of Army Modeling and Simulation (M&S) with Army command and control. The CTSF has formally recognized the PEO STRI DIL as an approved auxiliary test site for the CTSF to conduct distributed AIC testing. The DIL facilitates the adoption of common interoperability-related products and standards across the Battle Command and M&S communities. DIL testing in support of the Army certification process will not duplicate or limit testing conducted by the Joint Interoperability Test Command (JITC), the U.S.Army Test and Evaluation Command (ATEC) or other test activities.

As a recognized extension of the CTSF and by operating in full cooperation with the CTSF, the DIL has established representative Command and Control (C2) networks in support of PEO STRI program development while reducing risks associated with the successful completion of the mandated Army Interoperability Certification (AIC).

The DIL has been recognized by HQDA CIO/G-6 as a Federated Net-Centric Site (FaNS).

BCTC-ES

BCTC-ES

BCTC-ES

Integration & Interoperability (I2)

MISSION

According to the U.S. Army policy for the acquisition of training devices, PEO STRI has been designated the U.S. Army Acquisition Center of Excellence for training and testing enablers. PEO STRI is striving to achieve the Department of Defense Training Transformation goal stating that Training Aids, Devices, Simulators and Simulations (TADSS) are developed for interoperability across the live, virtual and constructive training environments and support operational and institutional, homestation, Combat Training Center and deployed training.

DESCRIPTION

PEO STRI recognizes this emerging need and is in the position to foster interoperability and integration of our current and future test and training systems to meet the LVC goal. By overseeing the planning, integration, cross-organization development, fielding and support of the PEO STRI portfolio, the organization can yield persistent simulation capabilities to meet LVC-derived requirements.

The concept of operations for the I2 is documented and provides the overarching description and guidance for its operation as chartered by the PEO. The document defines three focus areas for the I2:

- Program Synchronization – Identification of key simulation activities and their interdependencies to identify issues and support decision making
- Interoperability – Implementation of processes to plan, develop, field and support persistent simulation capabilities for interoperability within PEO STRI programs to support user needs for training and testing
- Common Components – Implementation of processes to develop and manage common

Integration & Interoperability (I2) *(Continued)*

simulation capabilities for cross-program use to increase the efficiency and quality of program development and support

Intelligence Electronic Warfare Tactical Proficiency Trainer (IEWTPT)

MISSION

To train commanders and battle staffs to focus intelligence assets that the commander deems most important; to train intelligence units and intelligence Warfighters on the ability to understand the commander's needs and on how to use the collectors and processors available to provide the commander with the required information.

DESCRIPTION

IEWTPT provides Warfighting commanders at all echelons the Intelligence, Warfighting Function (IWF) based on realistic Intelligence, Surveillance and Reconnaissance (ISR) assets, people (maneuver commander, G-2, G-3, collection managers, analysts/operators), and processes. IEWTPT is a Non-System Training Device (NSTD) that stimulates military intelligence warfighting equipment. IEWTPT provides proficiency training for operators and battle staffs and allows commanders to synchronize their ISR assets. Analyst/system operators are able to exploit exercise intelligence data during training just as they would in "real world" operations. IEWTPT is comprised of three components: Target Signature Arrays (TSA); Technical Control Cell (TCC), HUMINT Control Cell (HCC), a major component of the TCC; and a constructive simulation (CBS/TACSIM/JCATS/JLCCTC) that feeds the TCC. The TCC interfaces with the Combat Training Centers and homestation instrumentation training systems to provide an operational environment, thereby merging the live, virtual and constructive training environments.

IEWTPT provides a realistic target environment for multi-intelligence disciplines including SIGINT, IMINT, HUMINT, CI, MASINT, GEOINT, and OSINT. IEWTPT must stimulate multiple systems TSAs (TUAV, TES, CGS, GRCS, CHARCS, DCGS-A, ACS, Prophet, etc.) as well as SIGINT Quick Reaction Capabilities. IEWTPT also provides static and dynamic training events. These training events include interactive environment for individual, collective and mission rehearsals/exercises and occur in an integrated, playback and stand-alone mode. IEWTPT generates an after action review of operator performance, crew performance and battle staff actions. It uses unclassified through classified data from the simulation/scenarios up to the Top Secret Sensitive Compartmented Information (TS/SCI) level. The TCC must interface with the Combat Training Centers and homestation instrumentation training systems to provide a total battlefield picture. The HCC is the Army's latest sustainment trainer for HUMINT/CI Collectors. The HCC allows the HUMINT/CI Collector to gather intelligence information from the virtual human while a HUMINT/CI instructor monitors the student's performance. At the end of the tactical questioning training event,

the HUMINT/CI collector reviews after action review statistics as well as HUMINT/CI instructor commands. The HCC currently is fielded with the IEWTPT at the Battle Command Training Centers. Finally, IEWTPT is transportable to support training if units are deployed.

IEWTPT

IEWTPT

Joint Exercise & Experimentation Integration (JEEI)

MISSION

To provide PEO STRI programmatic, technical and analytical support for planning, developing, integrating and executing JNTC activities.

DESCRIPTION

JEEI is the tangible presence of PdM WTI and PEO STRI at JNTC activities. It compiles the information provided at these activities, outreaches to PEO STRI entities and receives and delivers feedback (requirements based). It maintains a strong, collaborative presence for the Army within the JFCOM realm. It also monitors the development of the JLVC and its associated joint standards. Specifically, it serves as the PEO STRI integrator for programs within the JNTC such as:

- Joint Rapid Scenario Generation (JRSG)
- Joint Architecture Technical Standards (JATS)
- Joint After Action Review-Resource Library (JAAR-RL)
- Joint Composable Object Model (JCOM)
- Joint Live, Virtual, Constructive (JLVC)
- Joint Training Review Group (JTRG)

LVC-IA

Live, Virtual, Constructive-Integrating Architecture (LVC–IA)

MISSION

To provide the foundational structure and framework for integrating live, virtual, constructive systems into the integrated Warfighter's training environment.

DESCRIPTION

The LVC-IA is a network-centric linkage that collects, retrieves and exchanges data among live instrumentation, virtual simulators, and constructive simulations as well as between joint and Army battle command systems. This architecture provides the common protocols, specifications, standards and interfaces that help standardize common LVC components and tools required for interoperability of LVC components for simulation/stimulation (SIM/STIM) of unit Battle Command Systems for mission rehearsals and training. The LVC-IA includes LVC simulation equipment (LVC SE) and interoperability tools along with integration support personnel. It also includes common and reusable LVC components and tools such as enterprise after-action review, C2/

Live, Virtual, Constructive-Integrating Architecture (LVC –IA) *(Continued)*

ISR ADAPTER Adapters, correlated terrain databases, multi-level security and hardware/ software requirements for LVC-IA. It involves data management, exercise management, exercise collaboration and updating training support system products.

Director Joint Coalition Simulation Systems (JCSS)

MISSION

To develop, acquire, field and sustain interoperable simulation environments in support of multi-service, joint and coalition forces.

Future Immersive Training Environment (FITE) Joint Capabilities Technology Demonstration (JCTD)

MISSION

To provide military trainers with sufficient enablers to train close combat tasks in a realistic, fully immersive training environment that creates and reinforces complex (tactical and human dimension) decision making skills.

DESCRIPTION

The FITE-JCTD Transition Manager (XM) is responsible for transitioning FITE JCTD capabilities to service, COCOM and non-DoD Agency Programs of Record (POR). As such, the XM develops the Transition portion of the FITE JCTD Management and Transition Plan (MTP), then implements the MTP transition strategy by convening and chairing a FITE JCTD Transition integrated product team. The IPT includes those Services / COCOMs / non-DOD Agencies interested in transitioning FITE JCTD capabilities. The XM will also coordinate the modification of, or development of, program of record documents, such as the Capability Development Documents (CDD) and the Capability Production Documents (CPD). The XM is a key partner in the Integrated Management Team (IMT), which directs the FITE JCTD.

Interactive Multi-media Instruction (IMI)

MISSION

Ensure rapid, cost effective and streamline contracting for delivery of high-quality training products to meet the immediate needs of the Warfighter. The IMI contract provides access to an array of innovative and creative providers of interactive multi-media products, that can be used by the Warfighter at homestation or when deployed.

DESCRIPTION

The JCSS IMI contract provides for analyses and studies specific to training systems and human performance to include job-task analyses. Additionally it allows for cost-benefit analysis, various technology infusion studies, training system analyses, performance improvement analyses, gap analyses, effectiveness studies and other studies and analyses that lead to effective human performance solutions. The contract also provides specialists in design, development and implementation of multimedia products utilizing accepted Instructional System Design (ISD) principles. The design, installation, and implementation of Automated Electronic Classrooms (AEC), incorporating Advanced Learning Technologies (ALT) designed to meet learning objective and performance requirements to maximize student engagement may also be procured. Specific products include: Interactive Courseware, Computer-Aided Instruction, Electronic Guides, Interactive Electronic Technical Manuals (IETM), Learning Management Systems (LMS), Electronic job aids (e.g., templates, macros, etc.) and Advanced Distributed Learning (ADL) Products On-line (web-based).

FITE JCTD

IMI

Tactical Digital Hologram (TDH)

MISSION

To address the need for a visualization tool that provides a bridge between complex battlefield imagery data and the ability to view this data.

DESCRIPTION

This visualization problem is particularly acute for complex terrain, subterranean bunkers and urban combat environments where two-dimensional maps and photographs cannot adequately represent a 3D battlefield. Holograms can be produced from virtually any 3D information, but TDH products to support our Warfighters primarily use Light Detection and Ranging (LIDAR) /Buckeye data. TBV products are produced by laser inscribing 3D information into a special film and then heat treating the film to set the image. The resulting product is a flexible, portable, rugged, deployable hologram that, when illuminated by a single point light source, reveals a 3D image above the film. To date, the TDH program has shipped approximately 5,000 holograms to our Warfighters.

IMI

TDH

Simulation to Command, Control, Communications, Computers and Intelligence (C4I) Interoperability (SIMCI) – SIMCI Executive Agent

MISSION

To provide common products, to support initiatives, to lead process improvement efforts and to make policy recommendations for improving and closing interoperability gaps between the Modeling and Simulations (M&S) domain and the Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) domain by employing the following chartered objectives: seamless interoperability between M&S and C4ISR systems, alignment of M&S and C4I standards, architectures and common C4ISR components, and identification of requirements for M&S and C4ISR systems to support interoperability; to provide user-level recommendations for Army policy on M&S to C4I interoperability directly to the three-star Army M&S General Officer Steering Committee.

DESCRIPTION

The SIMCI program is focused on improving interoperability between the M&S domain and the C4ISR domain. SIMCI uses an Overarching Integrated Product Team (OIPT) approach with more than 30 member organizations Army-wide to address five key SIMCI components architecture alignment, common data/object models, common standards, reusable component interfaces and programmatics–processes/certification/education. The SIMCI OIPT is co-chaired by PEO STRI and PEO Command, Control and Communications Tactical (PEO C3T).

// EMBEDDED TRAINING ENHANCES WARFIGHTER READINESS

Training anytime, anywhere provides Soldiers an edge in familiarity and effective use of operational equipment. Embedding live, virtual and constructive training capability into our operational systems enables individuals, teams and units to truly train as they fight. This familiarity and repetitive effective use breeds confidence, in the systems, the Soldier and the unit's ability to accomplish the mission.

PM FFS SUPPORTS ARMY PEO INTEGRATION

Introduction

Project Manager Future Force Simulation (PM FFS) serves as the Program Executive Office for Integration integrating agent for PEO STRI focused on leveraging PEO STRI products to serve as the foundation for embedded training. PM FFS is the single point of contact for integration and interoperability of simulation solutions providing the Warfighter with the best possible training environment in support of the Army's PEO Integration activities. PM FFS also coordinates across the Army to ensure synchronization of Training Aids, Devices, Simulators and Simulations (TADSS) to support and enable training of PEO Integration initiatives. PM FFS is the government lead of the Training System Integrated Product Team (TS IPT) on behalf of PEO Integration. The TS IPT's role is to provide the management and oversight of the embedded training development to support Army modernization.

Embedded Training for Brigade Combat Team Modernization (BCTM)

Embedded Training (ET) Concept

DESCRIPTION

ET is emerging as the user's preferred option as the cornerstone of a platform-centric training paradigm. ET capability is an integral and organic component of the system platforms and C2 software architectures, such as System of Systems Common Operating Environment (SOSCOE). ET will enable seamless interoperability with non-organic resources including TADSS, homestation instrumentation training systems, Combat Training Centers (CTCs) and knowledge repositories (e.g., Reimer Digital Library). The ET capabilities will support training across the entire spectrum of operations from individual tasks through brigade-level collective training. Users will be able to conduct live, virtual, and constructive anywhere and anytime.

Embedded Training (ET) Components

DESCRIPTION

ET for PEO Integration includes three major capabilities: a synthetic training environment that enables training in live, virtual and constructive environments, Interactive Multimedia Instruction (IMI) and training management. The three major capabilities are supported by an ET infrastructure and standards that include a series of Training Common Components (TCCs) being developed by leveraging existing Army training programs. The synthetic environment initially includes a distributed Live and Constructive (LC) training capability, with the vision of migrating with embedded virtual training as the new ground combat systems emerges and as modernization of current operational platforms occur. Synthetic environment resources include computing resources, Computer Generated Forces (CGF), automated assessment that crosswalks task accomplishment with task standards and conditions, and a common after action review interface using standardized AAR data as part of the Training Common Components (TCCs). AAR packages will be generated and made available whether units and Warfighters are training at an institution, a homestation, a CTC or a deployed location. The data from an AAR will be stored locally and within the Army Training Information/Data Management framework for archiving and unit training management purposes.

Live training will utilize interfaces with the CTCs through the Common Training Instrumentation Architecture (CTIA) and the embedded Live Training-Tactical Engagement Simulation (LT-TES) on both the emerging Ground Combat Vehicle and Unmanned platforms. Training provided through Interactive Multimedia Instruction (IMI) will be conducted at every Warfighter Machine Interface console with Sharable Content Object Reference Model (SCORM) compliant training products. Warfighters will be able to use their operational systems to train on platform-specific tasks, on

courses that support Military Occupational Specialty qualification for professional development and on operational-related subjects. Finally, the training management component will record training and certification results and provide course and curriculum information and materials. If the required products are not available onboard the platform, the Warfighter can use the "REACH" capability to request needed training materials from institutional or homestation repositories through the Army Knowledge Enterprise (AKE).

PM FFS is collaborating with PEO STRI PMs to support the establishment of Training Common Components (TCC). These common software components establish the basis of the infrastructure for simulation-based embedded training. Through opportunistic reuse of PEO STRI contributing programs (One Tactical Engagement Simulation System (OneTESS) or Army TESS, One Semi-Automated Forces (OneSAF), and Synthetic Environment Core (SE Core)), the Army will achieve significant cost avoidance and be able to map ET capabilities that are more readily portable to satisfy current force training needs. This achievement also serves to facilitate the convergence of training capabilities across the force.

BRIGADE COMBAT TEAM (BCT) TRAINING CONCEPT

UNMANNED AERIAL SYSTEM, CLASS I (UAS CLI)

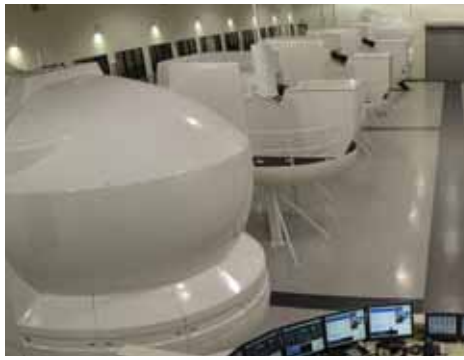
SMALL UNMANNED GROUND VEHICLE (SUGV)

Modernization through Increments

DESCRIPTION

The former FCS(BCT) Spin Out deliveries are now focused to achieve modernization through insertion of capability to the brigade combat teams mapped against a continuous incremental process through ARFORGEN. PM FFS will facilitate the development of embedded training capabilities, as well as standards that will be instantiated in new emerging platforms and C2 capabilities, as well as with existing operational platforms as technically feasible and affordable. Additionally, PM FFS will facilitate the synchronization of embedded training solutions with other system training capabilities, non-system TADSS and instrumentation systems to ensure alignment of training capability with the incremental introduction of technologies as part of Army PEO Integration.

PM FFS will serve on point for PEO STRI to ensure the Army's training capabilities keep pace with this incremental modernization approach.



//PROGRAM MANAGER FIELD OPERATIONS

Warfighter FOCUS (WFF) is PEO STRI's flagship contract for training services. Over 335,000 training devices at 600 locations worldwide are maintained using WFF. Operation Iraqi Freedom and Operation Enduring Freedom receive extensive support under WFF. Since 2004, over 500,000 Coalition Soldiers have trained in Southwest Asia using WFF services.

SUPPORT TO THE WARFIGHTER

ON TIME, ANYTIME, ANYWHERE

Introduction

PM Field OPS provides worldwide operations, maintenance, sustainment and instructional support of training systems used by the U.S. Army, Air Force, Marines, Navy and multinational coalition forces. PM Field OPS uses three training services contracts to accomplish its mission of providing integrated live, virtual and constructive training worldwide. The three contracts are the Warfighter FOCUS contract, the Artillery, Chemical and Air Defense contract, and the Flight School XXI training services contract.

PM Field OPS

Program Manager Field Operations

Warfighter FOCUS (WFF)

DESCRIPTION

WFF provides worldwide integrated operations, maintenance, sustainment, instruction, and other training support services for training devices, simulators, simulations, Combat Training Centers and ranges. These services are provided primarily to the U.S. Army but are also provided to other U.S. services and coalition partners. WFF provides the opportunity for unprecedented training support flexibility within a site and among multiple sites. Training support is seamlessly provided where and when it's required. Some of the areas supported under WFF include all three Combat Training Centers, ranges, tactical engagement systems, Engagement Skills Trainers, Close Combat Tactical Trainers, aviation flight simulators and the Battle Command Training Centers. Additionally, WFF provides military instruction including new equipment, tactics and literacy training services to the Iraqi and Afghan Armies.

The Flight School (FS) XXI

DESCRIPTION

The FS XXI simulation capability is a long-term, contractor-provided training service consisting of three parts: Training Helicopter (TH-67) virtual simulators, advanced aircraft virtual simulators (UH-60A/L, AH-64A/D, OH-58D, & CH-47D) and a training support/management oversight capability. Systems are owned, operated and maintained by the contractor with government oversight and approval. The contract ensures that standards are met through performance requirements clauses. Aircraft concurrency and technology upgrades are partially offset within the planned funded stream. The number, type, functionality, fidelity and availability of the flight simulators meet the needs of student loads, training schedules and individual/crew and collective training requirements prescribed by the United States Army Aviation Center of Excellence at Fort Rucker, AL.

The Artillery, Chemical and Air Defense

DESCRIPTION

The Artillery, Chemical and Air Defense contract is an 8(a) set-aside for providing worldwide life-cycle contractor support (LCCS) for the Army's Air Defense, Field Artillery and Chemical Training devices.

More than 1300 training devices located worldwide are supported. These include the Call For Fire Trainer, the Fire Support Combined Arms Tactical Trainer and the Chemical Agent Monitoring Simulator.

//THREAT VEHICLES UTILIZED BY DOD WEAPON SYSTEM MATERIEL DEVELOPERS

The SMERCH Multiple Launch Rocket System (MLRS) (above) has 12 launching pipes, rotating base, turning, lifting, and aiming devices, electronic and auxiliary equipment. The Networked Electronic Support Threat Sensors (NESTS) (lower left) provides a three-tiered approach to providing a threat SIGINT and Direction Finding capability during test and evaluation. The T-80UDG MBT (right) is fitted with a guided missile system, enabling the main gun to fire a laser guided missile.

ITTS... FOR SOLDIERS

Introduction

Project Manager Instrumentation, Targets and Threat Simulators (PM ITTS) was established in 1990 at Aberdeen Proving Ground, MD, to provide centralized acquisition of the research, development, production and fielding of test assets and investments in support of full-spectrum, developmental and operational testing for the U.S. Army. PM ITTS serves as the Army's single manager for acquiring targets, threat systems and major test instrumentation.

PM ITTS

Project Manager Instrumentation, Targets and Threat Simulato

Project Manager Instrumentation, Targets and Threat Simulators

Project Manager Instrumentation, Targets and Threat Simulators (PM ITTS) directs the research, development, design, acquisition, fielding, modification and capability accounting of major instrumentation, targets and threat simulators required for developmental and operational Test and Evaluation (T&E) and training. PM ITTS manages the Central Test and Evaluation Investment Program (CTEIP) and Resource Enhancement Program (REP) for the Army. Operations of targets for T&E and training of Army and Foreign Military Sales (FMS) customer troops also fall under PM ITTS' responsibilities. The project manager develops and implements policy direction and controls over funding and execution of major instrumentation, targets and threat simulators/simulation projects. PM ITTS serves as the Army's single manager for acquiring targets, threat simulators/simulations and major test instrumentation.

Instrumentation Management Office (IMO)

Command, Control and Communications (C3) Driver

MISSION

To provide a single box solution that integrates existing tools into a cohesive and concise package. C3 Driver provides end-to-end integration of planning, simulation and stimulation, monitoring, data collection and analysis services for the testing, evaluation and training communities.

DESCRIPTION

C3 Driver is an integrated collection of Army Test and Evaluation Command (ATEC) tools in a single box that provides end-to-end, system-of-systems event/exercise planning, monitoring, execution and control; U.S. Army tool for creating, modifying and managing doctrinal mission threads developed by TRADOC; data collection, aggregation, reduction, analysis, display and storage; and integrated tools for exercising C4I interoperability. In addition, a family of products integrated under a common user interface that includes the following: Starship/StarGen-user interface and C2; data collection and stimulation; data reduction and analysis; role playing capability; and Army approved message validation tools. C3 Driver makes testing more user friendly with an easy-to-use interface reducing the complexity of using sophisticated engineering analysis tools. Users are helped through the testing process by automatically configuring and using the appropriate tools. With C3 Driver, the effort and knowledge to configure and use a collection of advanced tools are reduced substantially. Categories of use include assisting in the daily system-of-systems integration testing at the Central Test Support Facility, developing Army Battle Command System threads for the Battle Command Integration Directorate and testing by the Army tactical system developers of systems before they are formally evaluated.

Contamination Avoidance Detector Test Suite (CADTS)

MISSION

To rectify the current broadbased, short-term deficiencies that exist for live, virtual and constructive testing of emerging DoD chemical/biological detector systems.

DESCRIPTION

The CADTS project enhances the capability of the Test and Evaluation (T&E) community to evaluate present and future Chemical/Biological (C/B) detector systems. Detector testing capabilities developed by the CADTS project include the detection of agents at lower concentrations; the development of test fixtures to generate dynamic agents that simulate expected operational conditions; and the improved quantification and assessment of interferent effects. The project also develops improved quantification and tracking of stimulant clouds; real-time data integration and processing; outdoor grid ground truth stimulant cloud characterizations; correlation between live C/B agents and simulants; and better representation of threat environments. In addition, dynamic C/B generators, such as spectral projectors, were developed to accelerate the evaluation of passive standoff detection systems.

CADTS

DETEC

Digital Network Migration (DNM)

MISSION

To integrate all range instrumentation and sensor systems at the U.S. Army White Sands Missile Range (WSMR) into a Global Information Grid (GIG) compatible data transport network for voice, video and telemetry.

DESCRIPTION

The DNM project is an upgrade to the existing SONET-based WSMR Test Support Network (TSN) and provides a 10Gbps, IPv6-based core capability to all range users. The current TSN Network Management System will be consolidated in a new Network Operations Center (NOC), which will have the capability to interface with the GIG via the Inter-Range Control Center resident in the Cox Range Control Center.

Directed Energy Test & Evaluation Capability (DETEC)

MISSION

To address critical Joint Service Directed Energy (DE) Test and Evaluation (T&E) infrastructure needs (identified in a tri-service study, August 2004) by acquiring and implementing selected

Directed Energy Test & Evaluation Capability (DETEC) *(Continued)*

high-priority T&E capabilities, then fielding them within the Major Range and Test Facility Base (MRTFB).

DESCRIPTION

DETEC is fast tracked to provide the 12 highest-priority, multi-service DE T&E infrastructure needs. The government uses a systems integration contractor to first develop functional specifications for high-priority DE T&E infrastructure capabilities, to acquire these capabilities in competitive procurements, and to integrate the capabilities into the MRTFB. Fifteen separate capabilities are being fielded to support open-air range testing of current and future High-Energy Laser and High-Power Microwave weapon systems. Delivered portable/transportable hardware systems are maintained by an MRTFB host site, which in turn provides scheduling flexibility by offering these DE T&E systems to other MRTFB sites for major weapons' testing. Other procedural or software-based systems are available to government and qualified contractors via the DETEC website.

Directed Energy Test Science & Technology (DET S&T)

MISSION

To mature and transition necessary high risk, high-payoff directed energy test technologies from the laboratory environment into DoD test ranges in support of future directed energy weapon systems' full spectrum test and evaluation shortfalls in the High-Energy Laser (HEL) and High-Power Microwave (HPM) domains.

DESCRIPTION

DET S&T is a multi-year Instrumentation Management Office (IMO) executed effort that is sponsored by the DoD Test Resource Management Center (TRMC). Because current DoD-directed energy test infrastructure is missing or inadequate to support future T&E objectives of DE systems/threats, DET S&T provides timely investments to mature technologies that fill critical current and future test gaps identified by the Directed Energy Test & Evaluation Capability (DETEC) Tri-Service Study Update and DoD test ranges/facilities. Annually, DET S&T releases a Broad Agency Announcement soliciting offerors to fill several outlined DE test gaps via projects to mature technology readiness levels from three up to a goal of six. Upon verification in a DoD test range environment, S&T prototypes are transitioned to DoD test facilities to support upcoming DE tests or future follow-on test infrastructure engineering developments (i.e., DETEC).

As of fiscal year 2008, the DET S&T team has a portfolio of more than 20 projects ranging from HEL onboard sensors, multi-waveband imagers, HPM nonintrusive miniaturized sensors and target boards, and various modeling and simulation tools for potential transition to DoD DE test facilities. With common IMO management and synergy with DET S&T and DETEC programs, S&T investments are aligned to support mature DETEC priorities and acquisitions as risk reductions, analysis of alternative candidates and pre-planned product improvements.

Fiber Optic Network (FON II)

MISSION

To provide instrumented test areas within Aberdeen Test Center (ATC) with high-speed communication links.

DESCRIPTION

FON II is intended to provide instrumented test areas at ATC, MD, with high speed communication links by modernization/ replacement of microwave, copper cable and slower ethernet links. ATC's Versatile Information System Integrated ON-Line (VISION) enterprise is dependent on FON II to move data both within the ATC intranet and through gateways to other locations.

MMTS

Joint Warfighter Test and Training Capability (JWTTC)

MISSION

To develop and improve common Human Systems Integration (HSI) live and virtual Test and Evaluation (T&E) methods, metrics and instrumentation capabilities to perform objective Warfighter performance testing within network-centric operations.

DESCRIPTION

The JWTTC serves as an overarching effort for HSI T&E within the Army Test and Evaluation Command. The main performance objective is to develop new unobtrusive T&E instrumentation, methods and metrics to include physiological and neurological instrumentation to track operator condition; instrumentation to capture and monitor information flow into and out of a system; instrumentation to capture Warfighter position, weapon position and other "ground truth" data; analysis tools to determine levels of workload and information overload; and metrics and instrumentation to assess the true level of situational awareness generated from information technology systems based upon the amount of information received, understood and acted upon, versus testing based upon raw information received.

Mobile Multi-sensor Time-Space-Position Information (TSPI) System (MMTS)

MISSION

To provide an accurate, mobile, multi-sensor TSPI system to support live testing of high-speed, low-altitude guided munitions.

DESCRIPTION

The MMTS is a state-of-the-art tracking system that will enhance the Army's ability to provide accurate live-missile and projectile-performance

Mobile Multi-sensor Time-Space-Position Information (TSPI) System (MMTS) *(Continued)*

data. Currently in the design phase, the MMTS is a mobile system that will track existing and future tactical missiles, rockets and projectiles in order to provide high-fidelity TSPI data. The system will be able to track high-speed (up to 2000m/s) guided munitions, as well as weapons with low/flat trajectories (as low as two meters) and low-radar cross sections. The system will employ both visible and infrared cameras along with a ranging radar, all integrated on a high-performance tracking pedestal. The MMTS will capture and produce highly-accurate positional information from launch to impact. Data will be further combined within the system post test to produce an accurate time-correlated flight path. The objective accuracy of the system is to resolve the position of the target missile within one meter at a range of 10 kilometers.

Objective Helicopter Icing Spray System (OHISS)

MISSION

OHISS is a DoD Test Resource Management Center (TRMC) CTEIP new start program. OHISS improves upon and replaces the current HISS equipment that generates an artificial cloud with controlled and quantifiable characteristics. This system is for the accretion of various ice forms on a trailing low-speed aircraft. OHISS will continue to be a unique national asset supporting multi-service aviation development and icing certification in the low-airspeed/low-altitude flight regime.

DESCRIPTION

OHISS includes a new Cloud Generation System (CGS) and a Cloud Characterization System (CCS). The OHISS CGS will create an artificial cloud in the live, natural environment to support rotary and fixed-wing, low-speed flight testing. Artificial icing clouds provide a safer, more reliable and more controlled flight-test environment for evaluating de-icing technologies. The cloud can also create rain conditions. Small-scale rain conditions provide a safer, more controlled flight-test environment for evaluating rain effects on critical aircraft surfaces, sensors and engine inlets.

Operational Test Command Analytic Simulation and Instrumentation Suite-Enterprise Integration Systems (OASIS-EIS)

MISSION

To develop common technology tools, processes, procedures, practices and standards required to support U.S. Army Operational Test Command (USAOTC) test missions.

Specifically, OASIS-EIS integrates test technologies and weaves them into the live test environment by providing a family of integrated systems to support operational tests.

DESCRIPTION

OASIS-EIS provides an acquisition strategy to adapt, buy or create the common components for a family of integrated, interoperable enterprise tools to support test technology "centers of gravity" which include live, virtual, constructive environments of selected warfighting systems. OASIS-EIS provides aggregate or entity-level intelligence, fires, command and control, movement, maneuver, communications and network effects both in live and simulated networks. OASIS-EIS provides a contemporary operational environment including crowds and populations; other non-kinetic effects; strong interfaces to test unit systems and other federations; interoperability with other domain (e.g., training experimentation, acquisition, analysis) systems; test control in rapid integration of test support; configuration management and control; test planning and virtual rehearsal; data collection, reduction and analysis of network data; collection of data on-the-move and data visualization; data collection, reduction and analysis and tactical (e.g., Army Battle Command Systems networks, etc.); and test control. OASIS-EIS integrates both OASIS-internal technology and OTC-external test technologies and weaves them into the live test environment. OASIS-EIS is an update for the current OASIS Integration Events, called JOSIE.

OHISS

Operational Test-Tactical Engagement System (OT-TES)

MISSION

To support realistic live, virtual and constructive operational and force development testing of current and future weapon systems in a combined arms environment.

DESCRIPTION

OT-TES represents the U.S. Army's core operational test instrumentation system with system upgrades planned through 2017 to accommodate new weapon systems, interactions with virtual and constructive simulations, and complete monitoring and analysis of Command, Control, and Communications (C3) in support of Army modernization and future initiatives, including Army PEO Integration.

OT-TES builds upon the Mobile Automated Instrumentation Suite (MAIS) fielded to the U.S. Army Operational Test Command (OTC) at Fort Hood, TX. The instrumentation suite is capable of data collection, test/exercise and combat simulation for Real Time Casualty Assessment during force-on-force engagements. Typical operational testing will consist of combined arms exercises including armor, infantry, logistics, engineers, field artillery, air defense artillery, minefields, aviation and chemical weapons. OT-TES has the capability to emulate threat weapons as well as friendly forces.

OT-TES is currently comprised of a mobile C3 Center and five categories of Player Units

Operational Test-Tactical Engagement System (OT-TES) *(Continued)*

(PU) and is capable of supporting combined arms testing events of up to 1830 participants in real-time. OT-TES uses fully tunable UHF TV band communications enabling worldwide mobility. An OT-TES Communications Upgrade Preplanned Product Improvement (P3I) is planned and will be radio independent, employ the first modern adaptive hybrid network using a spectrally efficient narrow-band Orthogonal Frequency Division Multiplexing (OFDM) robust waveform and accommodate up to 5000 PUs when fielded in fiscal year 2011.

Quantitative Visualization (QV)

MISSION

To develop an application for testing that combines real-time measurements with simulation and modeling elements, geospatial environments, networking infrastructures and display technologies to create a capability that allows quantitatively precise visualizations of a test from an all-encompassing perspective.

DESCRIPTION

QV is an integration effort to combine "live" measurements with simulation modeling, Geospatial Information System (GIS) data and networking/display technologies to generate real-time quantitatively precise visualization of tests. QV will support ground combat systems, air combat systems, Soldier systems and UA/ABCTM.

Starship II

MISSION

To provide automated command, control and health/status monitoring of the live, virtual and constructive distributed test and training environments.

DESCRIPTION

Starship II is designed to facilitate and automate the Command and Control (C2) functions of event planning, execution and status reporting. Starship II provides an environment for the user to plan and generate planning documents, verify configuration, and initialize, execute, synchronize, monitor, control and report the status of any sequence of activities. Starship II is adaptable to different communications media (radio, secured radio, local area network and wide-area network and internet). Starship II is fully customizable to any domain and has templates for the testing and training communities. Starship II can be used to control, monitor and display the status of live, virtual or constructive instrumentation, models and simulations.

System Test and Integration Laboratory (STIL)

MISSION

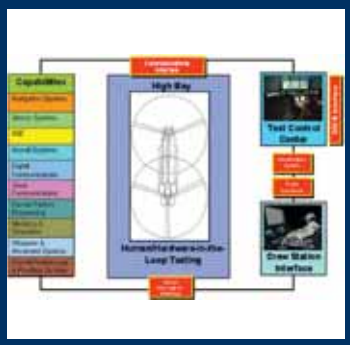
To develop a laboratory for the testing and evaluation of integrated systems and electronic components systems on aircraft prior to flight test. This lab will enhance the Army's ability to rapidly, accurately and efficiently perform developmental testing on new and modernized aircraft and their integrated systems.

DESCRIPTION

The STIL project will develop two major test capabilities composed of test suites and test control center infrastructure, each with its own specific operational requirements:

- An Aviation STIL with a reconfigurable cockpit that will be used for aviation systems platform testing at the Aviation Technical Test Center, Huntsville, AL
- A smaller Weapons STIL that will be used for aviation weapons platform testing at Yuma Proving Ground, Yuma, AZ

STARSHIP II



STIL

Test Resource Management Center (TRMC) Test & Evaluation Science & Technology (T&E/S&T) Consolidated Contracting Activity (CCA)

MISSION

To improve overall DoD Test Resource Management Center (TRMC) Test & Evaluation Science & Technology (T&E/S&T) program execution by providing responsive, single-source acquisition and life-cycle contract management services to remotely located technical focus areas.

DESCRIPTION

The TRMC S&T CCI is a multi-year Instrumentation Management Office (IMO) acquisition customer support effort for all services. IMO releases annual updated technical topics via a Broad Agency Announcement (BAA) where offerors compete for available S&T funding. IMO awards and executes contracts for S&T projects upon completion of annual BAA source selection efforts. Technical focus area teams manage their S&T projects with similar objectives as described earlier under the Directed Energy Test Science & Technology (DET S&T) program description. DoD TRMC T&E/S&T program management office funds seven specific focus areas in support of future full-spectrum DoD weapon tests.

Targets Management Office (TMO)

21st Century Target Control Program (21C TCS)

MISSION

To improve and replace aging, target control data link technology at White Sands Missile Range; to develop, acquire and integrate the replacement hardware for the existing 915 MHz. datalink system; and to modify, acquire and integrate the UHF and L-Band datalink systems.

DESCRIPTION

The Drone Formation Control System (DFCS) has been operating with data links in the 915 MHz frequency range. These units range in age from 12 to 30 years and are either reaching or have surpassed their intended life span. A major thrust of this program is to modernize this equipment. The 21C TCS ultimate goal is to incorporate several data links and have the capability to use multiple data links simultaneously. Among these are the Ultra-High Frequency data link developed for the Target Tracking Control System, the existing 915 MHz frequency and the L-band for ground targets. Use of this data link will reduce target operation costs for all customers who use the 21C TCS in this configuration while maintaining the higher throughput capability of the 915 MHz transponders when they are required.

Aerial Weapons Scoring System (AWSS)

MISSION

To provide objective scoring for aviation gunnery crew qualification and training.

DESCRIPTION

The AWSS is an objective scoring system that supports live Army aviation gunnery training. AWSS provides scoring for 2.75-inch training rockets, both point detonation and multi-purpose sub-munitions, area scoring and hit location for a variety of machine gun weapons, and laser scoring of the Hellfire training missile. Four systems are provided for U.S. training exercises and are deployed as needed to support homestation training events. The fifth system is stationed in Grafenwoehr, Germany and supports training both in Germany and in other European countries. The sixth system is stationed in Korea and supports Pacific theater training events. An annual scheduling conference, held in conjunction with the Aviation Master Gunner's Conference, prepares a baseline schedule for deployment of the U.S. systems for the following fiscal year.

Air Defense Artillery (ADA) Targets

MISSION

To provide live targets and scoring systems in support of Air Defense Artillery (ADA) Standards in Training Commission Department of Army Pamphlet 350-38.

DESCRIPTION

Crew-gunnery and live-fire training is conducted using various unmanned aerial targets. The targets are threat representative of cruise missiles, unmanned aerial vehicles and low-flying, fixed-wing aircraft. These targets must be capable of simulating threat target characteristics and require the ADA weapon system crew to utilize and understand its maximum capability. Numerous types of aerial targets, operated by troop units or furnished and operated by contract personnel, are available for ADA service practice. Training programs must result in demonstrated tactical and technical competence, weapon system confidence and abilities of our Warfighters. The most commonly used targets and support devices used for this training are:

- Remotely Piloted Vehicle - Target (RPVT)
- Ballistic Aerial Target - System (BATS)
- Scoring Miss Distance - Indicator (MDI)

21C TCS

AWSS

Air Defense Scoring Systems & Services

MISSION

To increase training efficiency by providing real-time feedback of scoring data.

DESCRIPTION

Scoring augmentation is available for installation on a variety of both aerial and ground live targets. Real-time feedback of scoring data is available by detecting and counting bullets' Miss Distance Indications (MDI) that penetrate a predetermined radio frequency field around the target. After action review reports are generated by the support contractor and provided to the unit immediately after completion of the mission. Scoring is contractor operated. Training support is scheduled with PM ITTS Targets Management Office.

ADA TARGETS

AIR DEFENSE

Ballistic Aerial Target System (BATS)

MISSION

To enable gunners in achieving quick reaction skills while engaging aerial threats.

DESCRIPTION

BATS provides a low-cost, realistic live target for the U.S. Army's Air Defense Artillery (ADA) battalions in support of the Stinger Man-Portable

Ballistic Aerial Target System (BATS) *(Continued)*

Air Defense System (MANPADS) and Avenger missile systems. BATS may be flown at low and medium altitudes and at speeds from 275 to 550 knots (140 to 285 meters per second). Its "pop-up" characteristics simulate the trajectory of a high-performance threat, such as a cruise missile, flying low to minimize radar detection that suddenly "pops up" and then dives on its target to deliver its ordnance. The BATS system enables gunners to achieve quick reaction habits to assist in their training methods to mitigate this type of threat. It is designed for operation and launching by military personnel, and the hardware can be requisitioned through the wholesale supply system; however, contract support teams can also provide this training area "turn-key" target service. The BATS systems are not suitable for air defense gun systems.

Deployable Range Package (DRP)

MISSION

To provide deployed units a live-fire training range in the operational theater.

DESCRIPTION

DRPs include all of the equipment, tools and instructions to establish and operate a training range in support of various combat units and their individual and crew-served weapons. Lifters for infantry and armor targets (both moving and stationary), along with generators, batteries, hammers, nails, tape and other small items needed to set up a training facility, are included in the containers shipped to the units. Target lifters are operated using handheld controllers that communicate via radio-frequency signals. The hand-held controllers allow training scenarios to be designed and run by range operators according to special unit needs. Master gunners responsible for conducting unit live-fire training are able to devise scenarios that use the available range space to its best advantage. If appropriate, the targetry can be divided among as many as three separate ranges allowing individual units to conduct their own mission-focused training.

Mobile Ground Targets (MGT)

MISSION

To provide the Test and Evaluation (T&E) community with mobile ground target vehicles for use as threat targets for destructive and non-destructive testing scenarios.

DESCRIPTION

The new generation of ground-to-ground and air-to-ground weapon systems that employ intelligent seekers require ground targets with visual, infrared, acoustic and radar signatures that accurately emulate the threat. The MGT program is responsible for managing the acquisition and certification of actual threats as well as the development, prototype fabrication and validation of ground target surrogates to meet these requirements. TMO provides centralized management, sustainment and control of these assets.

The MGT program consists of three components: Mobile Ground Target Hardware, Mobile Ground Target Operations and the Operational Threat Vehicle Company.

BATS

DRP

MGT

Component 1: Mobile Ground Target Hardware (MGTH)

MISSION

To provide actual and surrogate targets for specific test scenarios.

DESCRIPTION

These targets are the highest priority based upon the Army Test and Evaluation Command Threat POM Advocacy Database.

Component 2: Mobile Ground Target Operations (MGTO)

MISSION

To provide the methods and procedures for the management, utilization, operation, control and support of foreign mobile ground targets, surrogate assets and equipment.

DESCRIPTION

MGTO is a fleet of operational foreign vehicles and equipment used as targets for test and evaluation. The vehicles are located at five primary operating centers that have the capability to perform operations and maintenance of the foreign assets. TMO has established a training course that provides instructions on safe operations and Periodic Maintenance Checks and Services procedures for foreign ground assets. A "train-the-trainer" program provides annual refresher training for operators.

The objective of the MGTO component is to support the testing and training community target needs as fully, efficiently and effectively as possible. Only properly trained personnel (civil service and support contractors) operate and maintain these assets. Vehicles can be transported to various locations for tests. Customers are responsible for transportation costs. Currently, the MGTO inventory consists of more than 350 assets that are available for training or testing events.

Component 3: Operational Threat Vehicle Company (OTVC) *(Continued)*

MISSION

To acquire and field fully mission-capable targets (such as T-72 Main Battle Tanks, BMP-2 Infantry Fighting Vehicles and BTR-70 Armored Personnel Carriers) to meet emerging requirements for threat representative missions.

DESCRIPTION

This program provides realistic threat-capable targets for use in force-on-force exercises allowing blue forces to think and adapt to the changing battle dynamic as it unfolds.

Precision Targetry System (PTS)

MISSION

To provide low-cost 2 1/2 and 3-dimensional targets and decoys.

DESCRIPTION

The PTS program replaces expensive threat vehicles for test and evaluation with highly-representative surrogate targets made using commercial printing and material manufacturing technologies that:

- Minimize cost
- Maximize signature fidelity - visual and thermal
- Minimize logistic requirements
- Reduce handling cost
- Are recyclable
- Maximize utility
- Integrate scoring

Remotely Piloted Vehicle Target (RPVT)

MISSION

The MQM-170 Outlaw RPVT is a highly-maneuverable, aerial target capable of flying realistic tracking and live-fire engagements. It provides versatile and affordable air-defense training today, preparing our air-defense Warfighters for improved effectiveness on the battlefield tomorrow.

DESCRIPTION

The Outlaw RPVT is a flight-proven unmanned aircraft that has flown thousands of sorties. The system is managed by the Targets Management Office to support the U.S. Army's air defense training needs, other DoD agencies and allied foreign military customers. Capable of numerous types of missions, the Outlaw's fixed-wing aerial platform and the support equipment provide targeting solutions for tracking and live-fire for gun and missile crews. The Outlaw's low cost, tactical size, superior maneuverability and multi-mission capability have made it the preferred aerial target within the air defense community.

Target Control System (TCS)

MISSION

To provide cost-effective, reusable and reconfigurable control subsystems for live sub-scale aerial targets, live full-scale rotary-wing targets and live unmanned/mobile ground targets used in test and evaluation programs and in training exercises. To redesign the target's control system avionics to reduce cost, weight and complexity through use of commercial components and by developing avionic components that have multiple applications. TCS is comprised of two components as described below.

DESCRIPTION

The TTCS is a mobile control system that provides on-site control of a large variety of targets. Through its ultra high-frequency data link (380-400MHz band), the system is capable of controlling up to four targets out to distances of 200 miles from the control console with a single data link unit. With a remote relay in place, the system can control targets out to 400 miles. Additional radio frequency units can be added to the control system network for additional target control. There are two configurations of the TTCS. The first is installed in a climate-controlled S280 transportable shelter or building, and the second is installed in hard-shell "suitcases" capable of being man-portable. With the addition of extra control consoles, both systems can be expanded to control as many targets as needed.

The Integrated Avionics Program (IAP) saw its first implementation on the MQM-107 aerial target as an upgrade kit. The core of the program was the development of the Common Avionics Package (CAP). The unit replaced nine expensive and bulky components within the aircraft and uses the CANbus-based Common Digital Architecture (CDA) to communicate to the target. The CAP consists of a vehicle interface/autopilot assembly, the Target Tracking and Control System (TTCS), ultra-high-frequency radio-frequency transponder, a 12-channel GPS unit and a ring laser inertial management unit. Custom-made interface nodes were developed specifically for the MQM-107. These nodes allow the CAP to interface to the legacy components on board the aircraft. The next phase of the IAP program will be the development of a new drone kit for the next generation helicopter target. A significant portion of developing a new drone capability is the development of the autopilot hardware and software.

PTS

RPVT

TCS

Target Management Initiatives (TMI)

MISSION

The TMIs are Office of the Secretary of Defense, Director of Operational Test and Evaluation (OSD DOT&E)-funded research and development initiatives to improve capabilities of targets used in live and virtual weapon system testing.

Target Management Initiatives (TMI) *(Continued)*

DESCRIPTION

The Rotary Wing Target Replacement Demonstration is a recently selected project to study and demonstrate whether there is a commercial drone helicopter that can adequately represent selected helicopter threats for the next 10 to 15 years. The current inventory of QUH-1 drones is nearly depleted, and a replacement is needed for use in Army and Navy operational tests.

On behalf of Headquarters, Department of the Army, the PM ITTS Targets Management Office (TMO) manages the Army-wide process for establishment, coordination, justification and performance of Army-led TMIs. TMI follows an annual cycle of need analysis, formal proposals, screening, peer review and selection by DoD. Training target efforts can qualify for TMI if they have a documented payoff in supporting weapons testing and meet the other announced criteria. Many TMI projects end with a transition of the R&D effort into a full development or production program.

The Army is usually engaged in several TMI projects at any time, often collaborating and partnering with another DoD service or agency. A majority of the Army-sponsored TMI efforts have been led by project directors within PM ITTS TMO. Recent TMIs have provided:

- "Interoperable Target Control System Studies"- technical studies of target control systems across DoD's test ranges
- "Metal Target Surrogate Analysis and Validation" (MT-SAV) – analytical understanding of why radar signatures of the same complex object vary between different measurement facilities
- "Realistic Low Cost Target (RLCT)" – prototype low-cost surrogates of threat ground vehicles with accurate visual and infrared signatures
- "Low Cost Target Mover (LCTM)" - standardized movers for ground target "shells"
- "Firefox Conceptual Design Study" – a preliminary design study for a low-cost jet target with the potential to represent selected characteristics of forthcoming "5th Generation" threats
- "Baseline Evaluation and Augmentation of Multispectral Mobile Ground Target System Radar Cross Section (BEAMR)" – validation of threat ground vehicle surrogate "shells" that accurately reproduce the passive radar signatures of the actual threats

Towed Targets Program

MISSION

To provide live towed target prototypes and production hardware that closely emulates the signature (radar or infrared) and performance of typical threat aircraft, remotely piloted vehicles or cruise missiles.

DESCRIPTION

The Targets Management Office Towed Targets Program has a variety of economical, off-the-shelf, towed targets that can be towed by both droned or manned aircraft systems. Towed targets can be used for both testing and training by various air-defense weapon systems. A broad

range of both large and small Radar Cross Section (RCS) towed systems are available on-the-shelf with no lead time for usage. All towed systems can be fitted with both miss-distance and bullet-counting type scoring systems. RCS measurements of all towed targets can be provided to potential TMO customers. If specific signature requirements cannot be met with in stock inventory tow targets, TMO can design and build customer specified signature tow targets. Either limited quantity prototypes or production quantities can be arranged by contacting TMO.

TOWED TARGETS

Unmanned Aerial System Target (UAS-T)

MISSION

To provide a generic, tactical class UAS-T to support testing of developmental weapon systems.

DESCRIPTION

The UAS-T provides a visual and performance representation of the class of Unmanned Aircraft Vehicle (UAV) systems likely to be currently employed against U.S. and allied forces or in the foreseeable future. The air vehicle can be controlled manually by the CloudCap Piccolo autopilot and by the Target Tracking and Control System-UHF (TTCS-U)-that are available on most Department of Defense test ranges. The UAS-T air vehicle incorporates a programmable autopilot to support a wide variety of repeatable flight profiles to represent UAV operations in a variety of mission profiles. UAS-T systems have been available to support test and training needs from April 2008 with existing prototype air vehicles. Production systems are now available to support target requirements.

UAS-T

Virtual Targets

MISSION

To develop simulation inputs from virtual target models to support visual, predictive radar frequency and predictive, infrared frequency simulations; conduct verification and validation of virtual targets, support development of high-fidelity CAD models for specific customer funded requirements, and maintain and distribute virtual targets through the Army Model Exchange.

DESCRIPTION

The Virtual Targets project provides four supporting modeling and simulation components: the Targets Generation Laboratory, the model verification and validation process, the Virtual Targets project for new customer-funded CAD model development, and the Army Model Exchange. As a supporting set of capabilities, the Virtual Target Center provides a wide array of support to the Modeling and Simulation community for test and evaluation. The Targets Generation Laboratory develops simulation inputs to support visualization, radar frequency and infrared simulations. The Target Generation Laboratory also addresses emerging simulation technologies to maintain model

VIRTUAL TARGETS

Virtual Targets

(Continued)

products suitable for simulation input both today and in the future. The model verification and validation process was developed by the Virtual Targets Center staff and approved by the Army Threat Validation Committee. Models are reviewed by this process to ensure that the model is properly constructed IAW AR 5-11 and properly threat representative IAW AR 73-1. The Virtual Targets project develops new, high-fidelity CAD models of field equipment for use throughout the Army and Department of Defense.

Threat Systems Management Office (TSMO)

CICADA

MISSION

To provide the Threat Force Commander with a live threat communications electronic attack jamming capability to incorporate into the threat information operations scheme of maneuver.

DESCRIPTION

Threat multi-range jammers, capable of neutralizing current and future data links. Capabilities:

- Frequency Range – 1.5 MHz to 3000 MHz
- Automatic, computer-controlled jamming sequences
- New, high-power amplifiers
- Fast TDM operation for simultaneously jamming multiple targets
- "Look through" capability ensuring jammer is only active when target signal is on the air
- Deception jamming
- Broadband TDM (barrage) jamming against simultaneously active frequency hoppers
- Programming of protected frequencies not to be jammed
- Local or remote control

Threat Computer Network Operations (CNO) Team

MISSION

To provide the threat force commander with a live threat computer network operations team capability incorporated with threat information operations scheme of maneuver.

DESCRIPTION

This team provides the key Computer Network Operations (CNO) operations support to Threat Systems Management Office (TSMO) events. It is designed to provide both penetration exercises and Threat Computer CNO, Computer Network

Attack, Computer Network Exploitation and Computer Network Defense to the threat commanders of the future.

Network Exploitation Test Tool (NETT)

MISSION

To provide the threat force commander with a live threat Computer Network Operations (CNO) tool to incorporate with the threat information operations scheme of maneuver.

DESCRIPTION

NETT is a comprehensive CNO test system that delivers an integrated suite of open-source exploitation tools. NETT is designed to be used by information warfare professionals to conduct live penetration and distribution tests on friendly-force systems for vulnerability analysis and system evaluation. NETT is the backbone to the threat CNO support capability provided within the threat information operations lab. Wireless - NETT will develop the capability to access the security of compromised terminals through wireless intrusion techniques against Army PEO Integration C4ISR networks. This program includes the integration of NETT and the wireless NETT into the Threat Battle Command Center.

R-47 Jammer

MISSION

To provide the Threat Force Commander with a live threat communications electronic attack jamming capability to incorporate with the threat information operations scheme of maneuver.

DESCRIPTION

Bulgarian manufactured manpack or vehicle-mounted VHF communications jammer designed to operate in the 20 to 100 MHz range.

Capabilities:

- Provides swept or spot noise in one of five channels using on/off keying
- Replicates threat artillery delivered expendable jammers
- Operates in either manual (stand alone) or remotely control modes

SA-18 GROUSE

MISSION

To provide the threat force commander with a live Threat Air Defense MANPAD simulator capability incorporated with the Threat Air Defense scheme of maneuver.

CICADA

NETT

R-47 JAMMER

SA-18 GROUSE

SA-18 GROUSE

(Continued)

DESCRIPTION

A Russian shoulder-fired manportable threat IR SAM system, the SA-18 Grouse is designed to engage low-flying targets and hovering helicopters. Guidance is via a two-channel cooled passive IR seeker, operating in the 1 to 2 and 3.5 to 5 micron wavelengths.

Capabilities:

- Head-on engagements with speeds up to 360-400 m/s and receding to 320 m/s
- IR and mobility fidelity
- Dual-channel IR seeker to defeat sophisticated IR decoys
- Maximum firing ranges of 4,500 m (approaching target) and 5,200 m (receding target)

// PM TRADE VISION

To be the premier provider of the best live training solutions to the Warfighter.

PM TRADE TRAINS THE WARFIGHTER

Introduction

Project Manager Training Devices (PM TRADE) is the Army's solution provider for instrumented training systems. PM TRADE's mission is to develop, acquire, field and sustain a family of interoperable live training solutions for use at homestation, Combat Training Centers (CTCs) and deployed sites to improve Warfighter readiness in peace and in war. Managing the acquisition of training systems to meet the user's requirements, the goal is to deliver the systems on schedule and within cost and to provide life-cycle management to ensure the best value products for the Army and joint service customers.

Live Training Transformation (LT2)

Live Training Transformation (LT2) Product Line

MISSION

To provide Project Manager Training Devices (PM TRADE) a product line strategy to efficiently and effectively address future live instrumented training systems acquisitions by focusing on the shared requirements of all live domain training systems with the strategic objectives to maximize commonality, systematic component reuse and to ensure interoperability across the live, virtual and constructive domains. The LT2 Product Line reduces fielding time, minimizes acquisition costs, enables total ownership cost reductions across the live domain and enhances training benefits afforded to the Warfighter through software and component reuse.

DESCRIPTION

The LT2 Product Line focuses on live-training domain requirements to maximize component reuse, reduce fielding time, minimize programmatic costs and enhance training benefits afforded to the Soldier. The LT2 product line includes live training systems in support of homestation training, deployed training, Military Operations on Urban Terrain (MOUT) training, Maneuver Combat Training Center (MCTC) training and instrumented live-fire range training. The LT2 product line is comprised of programs that use the Common Training Instrumentation Architecture (CTIA), the Future Army System of Integrated Targets (FASIT) Architecture and the LT2-CTIAcomponents to implement the various product instantiations, such as the Objective Instrumentation Systems (OISs) for the MCTCs, Homestation Instrumented Training System (HITS), Army live-fire Digital Range Training Systems (DRTS), Integrated -Military Operations on Urban Terrain Training System (I-MTS), Exportable Training Capability-Instrumentation System (ETC-IS), One Tactical Engagement Simulation System (OneTESS), the Targetry Range Automated Control and Recording (TRACR) program and the New Generation Army Target Systems (NGATS) ground target programs.

PRODUCT LINE VISION:

Through successful execution of the product line strategy, LT2 will deliver a set of assets that provide integrated and interoperable training solutions for live collective training across the homestation, MCTC and deployed and joint training domains. The LT2 product line vision is captured in the figure at the right and in the following program objectives:

- Produce a product-line architecture that completely supports live instrumentation, Tactical Engagement Simulation System (TESS), targetry, domain-specific services and associated equipment for live training within the Army's doctrine-based training process
- Engineer a product-line process and associated standards, tools, rules and guidelines that foster development of both components and products that are compliant with the product-line architecture
- Produce a set of common applications that plug-and-play in the product-line architecture and are applicable across a wide range of programs within the LT2 domain
- Encourage development of common applications and products and capture convincing evidence of the benefits of a

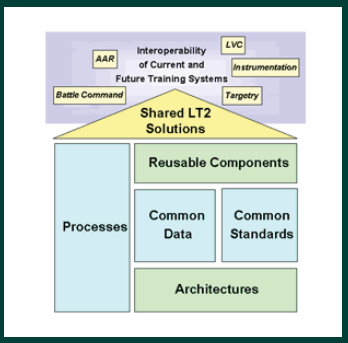
product-line approach

- Provide a flexible architectural environment that will support evolution of the architecture to support all Army live training simulation systems, as well as integration with emerging Army and joint architectures such as the Test and Training Enabling Architecture (TENA) and the Live, Virtual, Constructive Integrating Architecture (LVC-IA)

PM TRADE plans to award the LT2 Consolidated Product-Line Management (CPM) Indefinite delivery/indefinite quantity (ID/IQ) contract in fiscal year 2010. The LT2 CPM contract will provide the management, maintenance and evolution for the LT2 Product Line core assets and will provide total product-line life-cycle support to product managers within the LT2 Product Line.

The LT2 CPM contract will meet the requirement for a consolidated streamlined approach that provides the project managers and product managers an efficient, effective and agile method to accomplish the following:

- Management, maintenance and evolution of the LT2 Product Line core assets
- Total life-cycle system management product-line support of systems/products within the LT2 Product Line family of training systems
- Product Line support of systems/products that leverage LT2 product line assets
- Support of external interoperability initiatives such as LVC-IA, joint and Foreign Military Sales.
- Synchronization with Warfighter FOCUS (WFF)



LT2

CTIA

Common Training Instrumentation Architecture (CTIA)

MISSION

To provide a flexible product-line architecture environment that will support the development and evolution of a common architecture to support Army live-training instrumentation systems. The product line provides integration and interoperability with legacy and emerging Army and joint architectures, such as the Live, Virtual and Constructive Integrating Architecture (LVC-IA) and the Test and Training Enabling Architecture (TENA). The CTIA will provide cost reduction across the total life-cycle of Army live-training instrumentation systems.

DESCRIPTION

The CTIA is the foundation architecture of the Live Training Transformation Family of Training Systems (LT2-FTS) strategy. The CTIA is the product-line architecture that provides commonality across training instrumentation systems and interoperability across LVC and joint training systems. It consists of the architecture services, software components, standards and protocols to be used by systems developers and is the core software component of the Army live-training instrumentation systems. The CTIA is a component-based, domain specific, product-line architecture that enables the U.S. Army's LT2 the ability

Common Training Instrumentation Architecture (CTIA) *(Continued)*

to leverage the high degree of commonality of requirements amongst the U.S. Army's instrumented ranges and homestations. With significant emphasis on commonality, the CTIA will improve the quality of training while significantly reducing development, training, logistics and sustainment costs. The CTIA and its family of product-line components are Army-owned and are managed by the PM TRADE LT2 Assistant Project Manager. The CTIA-based systems are fielded and fully operational at the Army's Combat Training Centers (CTCs) and at several homestation training ranges. Additional CTIA systems are being fielded by the Marine Corps and Air Force. The CTIA systems are Information Assurance certified to operate at the secret classification level.

Future Army System of Integrated Targets (FASIT)

MISSION

To provide and maintain a set of common specifications and interface protocols associated with live fire range target systems.

DESCRIPTION

The FASIT will provide a single target system architecture and standard solution set (specifications and interface standards) for live training range devices. The FASIT standards allow for the replacement of the aging family of range devices first fielded in the late 1970's/ early 1980s while allowing for standardization and future technology insertion. Its capabilities include reduced life-cycle costs, an improved realistic look, a reduction in components size, weight and battery requirements and a data interface port for instrumentation capabilities. The FASIT is part of the overarching LT2 product-line initiative within PM TRADE that is driving the live-training standardization strategy.

Live Training Transformation (LT2) Video Service Oriented Architecture (SOA)

MISSION

To provide the SOA concept and contract specification used to create a non-proprietary, interoperable standard to allow various service consumers (TOC2, TAFF workstations, etc.) to communicate with any video control system regardless of the video vendor.

DESCRIPTION

The goal of the Video SOA is to create a mechanism to organize and utilize the distributed video capabilities located on a live training range in a uniform manner that provides compatibility with various consumers on the training data network. The SOA allows

for a vendor-neutral approach to linking video sources and controls with any range operations software system. The SOA approach is the ideal solution for addressing the Live Training Transformation Family of Training Systems (LT2-FTS) need for video services. Because there are many different ranges and training sites around the world, it is necessary to "plug-in" the various LT2 products into any range and have interoperability with the local video services infrastructure. The Video SOA will prevent the creation of stovepipe systems, where the consumers of video control services interface to a vendor-specific video system. Such a stovepipe would require costly rework if the video system were to change. It also requires a vendor-specific consumer implementation at each site where the video system is different.

MOUT

Military Operations on Urbanized Terrain and Cultural Training (MOUT-CT) Center of Excellence (CoE)

MISSION

To provide support and/or conduct research, development, testing, and evaluation of MOUT and cultural training technologies and to assist the services in the integration of these technologies into new and existing training programs of record.

DESCRIPTION

The MOUT-CT CoE will help the services in rapid fielding of advanced MOUT training capabilities, provide the ability to leverage and coordinate services' Research, Development, Test and Evaluation (RDT&E) efforts, reduce acquisition costs, program schedules and program risks, provide a mechanism to investigate solutions for training shortfalls, and promote interoperability of live, virtual, and constructive assets. The MOUT-CT CoE will provide a means to demonstrate, assess, evaluate and validate new capabilities at the Florida National Guard MOUT facility in a holistic, immersive simulation environment through a disciplined experimental design and evaluation process. The MOUT-CT CoE will provide a facility to conduct technology and training experiments focused on cultural/environment realism enhancements, communications enhancements, situational awareness, target system elements and other specified and to-be-determined areas based on input from operational units, technologists, researchers, user requirements and available resources. The MOUT-CT CoE is envisioned to enhance the Warfighters' ability to successfully accomplish their missions as a result of exceptional training experiences.

MOUT

MOUT

Target Modernization

MISSION

To provide and maintain a set of standard requirements synchronized with the Live Training Transformation (LT2) for range device capabilities and communication protocols that

Target Modernization

(Continued)

allows "plug and play" for differing hardware solutions across live training ranges; to provide a mechanism for developing and implementing capabilities in support of the standard and emerging technologies and requirements.

DESCRIPTION

The Target Modernization effort is the overarching means to generate and provide a standard solution set for range devices. This includes a single common target controller for all Army targets identified in Training Circular 25-8 Ranges with a common look and feel and an integrated graphical-user interface in accordance with the LT2 Style Guide and in compliance with the Common Training Instrumentation Architecture. The single target controller controls legacy targets (RETS/ERETS) and Future Army System of Integrated Targets (FASIT) and allows for commercial-off-the-shelf system integration (via standard interface documentation to allow industry to create their own interfaces and/or adapters). It also includes a standard performance specification (FASIT), a standard set of interfaces (FASIT Interface Control Documents), and target technology development and technology insertion.

Targetry Range Automated Control and Recording (TRACR)

MISSION

To provide a single common target controller for all Army targets identified in Training Circular 25-8 Ranges with a common look and feel and an integrated Graphical User Interface in accordance with the LT2 Style Guide and in compliance with the Common Training Instrumentation Architecture. The single target controller controls legacy targets (RETS/ERETS) and Future Army System of Integrated Targets (FASIT) targets and allows for commercial-off-the-shelf system integration (via standard interface documentation to allow industry to create their own interfaces and/or adapters).

DESCRIPTION

The TRACR system is a software application that supports the planning, execution and review of scenario-based training at non-instrumented Army training ranges. TRACR allows users to develop automated target control scenarios that support time and event-based target control, as well as triggering via manual control. TRACR permits the user to control the training scenarios via scenario or manual overrides. TRACR also collects target engagement statistics and assists the user with the generation and presentation of after action review material. Currently, the TRACR system can be utilized on all live-fire training ranges, from the small arms, lane-based versions up to large maneuver ranges such as Multipurpose Range Complex (MPRCs). TRACR is a proven replacement for the existing Enhanced Remote Equipment Target System (ERETS) control system and is also compatible with FASIT compliant targets.

Product Manager Live Training Systems (PM LTS)

Aerial Weapons Scoring System Integration with Longbow Apache Tactical Engagement Simulation System (AWSS-LBA TESS)

MISSION

To provide force-on-target gunnery training for Longbow Apache pilots.

DESCRIPTION

AWSS LBA TESS provides the LBA pilots the ability to conduct force-on-target engagements using live ammunition for 30mm and rocket engagements and simulated Hellfire missile engagements. The SMart Onboard Data Interface Module (SMODIM) sends altitude, heading, speed, trigger-pull and pairing-line engagements from the AH 64D to the ground station to be used in after action reviews. Pilots and commanders use sophisticated AAR tools to train, rate and score the pilot's gunnery performance for instant, positive, value-added feedback.

TRACR Ft. Eustis

TRACR Maneuver Base

Armored Security Vehicle Multiple Integrated Laser Engagement System (ASV MILES)

MISSION

To provide force-on-force capability for the Armored Security Vehicle.

DESCRIPTION

ASV MILES provides the ASV crews the ability to conduct force-on-force maneuver training, to include convoy training and affords the unit the means to train Soldier combat engagement skills using go-to-war weapon platforms in a safe environment at any organizational level from platoon to brigade. The system includes a Wireless Integrated Target System (WITS) kit that is adapted with a wireless weapons link enabling crew-served weapons to be associated with the vehicle.

AWSS-LBA TESS

ASV MILES

Counter Radio Electronic Warfare 2 (CREW2)

MISSION

To provide the Warfighter a training simulator that looks, feels and operates like the equipment fielded to operational units to train users to employ current electronic countermeasure (ECM) equipment in response to an adaptive threat and to understand the potential impacts

Counter Radio Electronic Warfare 2 (CREW2) *(Continued)*

of using radio frequency emitters on enemy and friendly-force equipment located in the same battle space.

DESCRIPTION

CREW2 significantly enhances and advances the operational readiness and tactical proficiency of Soldiers in tactics, techniques and procedures during employment of the tactical CREW devices and subsequent Counter-Improvised Explosive Device (C-IED) measures. The system maintains full functionality of all switches, lights, indicators and procedures with the ultimate goal of providing a training simulator that replicates the equipment fielded to operational units. The CREW2 Training System is compatible and interoperable and interfaces with the currently fielded families of CREW and IED training devices, such as the CREW 1 (Warlock) training device, the Training Improvised Explosive Device Increment 2 (TIED 2) devices and the Self-Contained Portable IED Simulator (SCoPIS). In addition, the system is adaptable for future IED simulators (IEDES) purchased for the joint community. The CREW 2 training device operates on assigned frequencies, effectively disabling the detonation components of the training improvised detonation devices. CREW2 captures operationally significant Electronic Warfare related events, configurations and settings to support an after action review.

Foreign Military Sales (FMS) Aviation

MISSION

To provide Longbow Apache aviation capabilities to U.S. Allies.

DESCRIPTION

FMS Aviation provides the Longbow Apache pilots of U.S.-allied, foreign nations to benefit in similar training devices utilized by U.S. Longbow Apache pilots. Training includes force-on-force and force-on-target training using laser and geometric pairing technologies. Commanders can monitor their pilots from ground stations with near real-time (one second) update rates reflecting altitude, heading, speed, enemy engagements, weapons selection, pairing lines and status of platform. Commanders and pilots use this data for after action review to teach, train and hone skills. Countries participating in FMS aviation programs at varying degrees include Kuwait, Taiwan, Netherlands, Singapore, Greece and United Arab Emirates.

Improvised Explosive Device Effects Simulator (IEDES)

MISSION

To provide better training fidelity by including more realistic training capabilities, reduced life-cycle costs and more realistic simulation for the current improvised explosive device threats in a live training environment. IEDES will assist the Army in training the joint and individual services on the key tasks of explosive hazards defeat required to support DoD IED defeat objectives.

DESCRIPTION

Under current force structure, IEDES is programmed to be fielded and employed in a full spectrum of operations and conflicts by offering realistic detection and reaction training against IED threats. IEDES consists of wireless and manual tripwires and control devices to simulate the IED threat. IEDES includes small through large IED simulators, a Module Control Unit, an Electronic Common Interface Device, a trip wire IED, booby traps and a suicide bombers vest. The Counter Radio Electronic Warfare 2 (CREW2) is compatible with IEDES to counter the threat of simulated IEDs. NOTE: The CREW 2 Training System is not included in the IEDES kit.

CREW Remote

CREW Primary

IEDES

Improved Target Acquisition System-Tactical Engagement Simulation System Field Training System (ITAS-TESS FTS)

MISSION

To provide the capability for the Warfighter to train with the Tube-launched, Optically-tracked, Wire-guided (TOW) anti-tank weapon system in an instrumented environment at the Combat Training Centers, homestations and deployed locations.

DESCRIPTION

The ITAS-TESS FTS is a laser-based system that accurately replicates the flight of the TOW missile system including missile fly-out in the gunner's sight. The system is completely wireless thus "cleaning-up" the interior of the vehicle platform, reducing installation time and system assemblies, and increasing flexibility.

Instrumentable Multiple Integrated Laser Engagement System Combat Vehicle System (IMILES CVS)

MISSION

To simulate both the firing capabilities and the vulnerability of the vehicle as well as a means to objectively assess weapon effects during training; to provide unit commanders an integrated training system for use at homestation local training area and instrumented training areas.

DESCRIPTION

IMILES CVS is a laser-based training device to be used on Abrams and Bradley vehicles to provide real-time casualty effects. It is an evolutionary approach for replacing older MILES CVS equipment currently used in force-on-force training exercises with devices that provide better training fidelity for combat vehicle systems. It will reinforce crew duties, reward proper engagement techniques and develop tactical maneuver skills of armor and mechanized infantry combined arms teams up to brigade level. It provides unit commanders an integrated training system in force-on-force and force-on-target training events at homestation training area through instrumented training. The system interfaces with instrumentation systems at Maneuver Combat Training Centers (MCTC). The IMILES CVS modular design will accommodate new weapons, ammunition and vehicle types. The U.S. Army will use and field IMILES CVS worldwide in all geographical areas.

Longbow Apache Tactical Engagement Simulation System (LBA TESS)

MISSION

To provide the capability for the Apache force to train in an instrumented environment at the Combat Training Centers, homestation and deployed locations.

DESCRIPTION

LBA TESS is an advanced training system developed for the LBA to provide combined arms training with an after action review capability. The system is comprised of an aircraft system and a contemporary operational environment opposing forces system that is fully deployable and provides player-to-player communications, decentralized engagement adjudication and Real Time Casualty Assessment (RTCA). LBA TESS uses geometric pairing for all Longbow weapons including hellfire, rockets and 30mm guns.

MK-19 Simulation Player Unit (SPU)

MISSION

To provide accurate training devices with line-of-sight laser engagements that measure unit performance and provide a positive training experience, giving Warfighters and staffs confidence in their equipment.

DESCRIPTION

The MK-19 SPU incorporates a modular design resulting in an interoperable solution simulating the firing and aural affects of a MK-19 in a Multiple Integrated Laser Engagement Simulation (MILES) system environment. It provides a common approach for the Stryker remote weapon station, M113 pintle mount, Amphibious Assault Vehicle (AAV), High-Mobility Multi-purpose Wheeled Vehicle (HMMWV) and ground mount. It includes independent casualty assessment, built-in optical alignment, four types of selectable ammunition, rechargeable battery for power source and controller gun for programmable lethality.

Mobile Gun System Tactical Engagement Simulation System (MGS TESS)

MISSION

To simulate both the firing capabilities and the vulnerability of the vehicle and provide a means to objectively assess weapons' effects during training; to provide unit commanders an integrated training system for use at homestation local training areas and at the Combat Training Centers.

DESCRIPTION

MGS TESS provides laser-based precision gunnery capabilities and force-on-force training. It is the most comprehensive training system, providing a full-fire control interface that allows the crew to train reinforcing tactical, crew and engagement skills. The main and secondary weapons are simulated and integrated through the Fire Control System (FCS). TESS interfaces with the vehicle with brackets and connectors and to the crew with audio and visual signals. Through sight video capture tracer effects, vehicle position and firing events, and record video from Gunner's Day, Gunner's Thermal, Commander's Panoramic Viewer and from the crew camera mounted in the turret to be used during AAR. The In-bore Device System is available as a cost-saving alternative to main gun live fire.

IMILES CVS

LBA TESS

SPU

MGS TESS

PM TRADE

Project Manager Training Devices

Multiple Integrated Laser Engagement System (MILES) XXI Combat Vehicle System (CVS)

MISSION

MILES XXI CVS simulates the effects of direct-fire weapons as they would affect vehicles and Soldiers during force-on-force exercise. It provides realistic training without the expense and environmental impact of firing live ammunition.

DESCRIPTION

MILES XXI CVS is a laser-based training device for Abrams and Bradley vehicles, which will provide real-time casualty effects necessary for tactical engagement training in a direct fire force-on-force training scenario. MILES XXI CVS allows the Army to train as a combined arms team with realistic casualty assessment. It is simple enough that crews can learn to operate it quickly, and the crew duties reinforce positive gunnery skills. It provides an evolutionary approach for replacing older MILES CVS equipment currently used at the Combat Training Centers.

Multiple Integrated Laser Engagement System for Foreign Military Sales (MILES for FMS)

MISSION

To provide force-on-force and instrumented CTC training capability to Foreign Military Sales customers.

DESCRIPTION

Production MILES hardware has been and is being provided under FMS cases. These FMS MILES deliveries from several different MILES manufacturers include foreign-made combat vehicles as well as different types of small arms weapons. Some of the vehicles presently outfitted with the MILES are the T-72/M80 and BTR-80. Past and present FMS customers are Kuwait, Croatia, Colombia, Latvia, Ukraine, Hungary, Georgia, Romania and Slovakia.

Multiple Integrated Laser Engagement System Independent Target System/Wireless Independent Target System (MILES ITS/WITS)

MISSION

To replace basic Multiple Integrated Laser Engagement System (MILES) target systems at homestations and maneuver Combat Training Centers Army-wide in accordance with the distribution plan.

DESCRIPTION

The MILES Independent Target System/Wireless Independent Target System (ITS/WITS) provides real-time casualty effects necessary for tactical engagement training in direct-fire, force-on-force training scenarios and instrumented training scenarios. It replaces all basic MILES Systems currently fielded on non-turreted military vehicles. Instrumentation interface is provided for CTC use and includes GPS weapon interface and battery eliminator functionality.

MILES ITS/WITS

Multiple Integrated Laser Engagement System Individual Weapon System (MILES IWS)

MISSION

To replace basic MILES IWS at homestations and maneuver Combat Training Centers according to the Army-wide distribution plan.

DESCRIPTION

The MILES IWS provides real-time casualty effects necessary for tactical engagement training in direct-fire, force-on-force training scenarios and instrumented training scenarios. It replaces basic MILES currently fielded. The system provides an instrumentation interface for CTCs and Homestation Instrumentation Training System (HITS)/homestation instrumentation system use.

MILES IWS

Multiple Integrated Laser Engagement System Shoulder Launched Munitions (MILES SLM)

MISSION

To field the MILES simulators for the M136 anti-tank weapons and various opposing forces equivalent systems for use at homestations and maneuver Combat Training Centers Army-wide in accordance with the MILES Basis of Issue Plan (BoIP).

DESCRIPTION

MILES SLM provides real-time casualty effects necessary for tactical engagement training in direct-fire, force-on-force training scenarios and instrumented training scenarios. MILES SLM replaces basic MILES currently fielded, improves simulation of opposing forces and links to MILES 2000 and MILES Individual Weapon System (IWS) torsos. It provides better training fidelity for blue forces weapons and a more realistic simulation of threat weapons using opposing forces visually modified vehicles (VISMOD).

PM TRADE

Project Manager Training Devices

Multiple Integrated Laser Engagement System Universal Control Device/ Micro-Controller Devices (MILES UCD/MCD)

MISSION

To replace legacy MILES controller devices at homestations and maneuver Combat Training Centers.

DESCRIPTION

The MILES controller devices are low-cost, lightweight devices used by observer controllers and maintenance personnel to initialize, set up, troubleshoot, reload, reset and manage participants during live force-on-force training exercises.

One Tactical Engagement System (OneTESS)

MISSION

To provide a common, realistic training and testing tactical engagement simulation capability across the Army.

DESCRIPTION

OneTESS is a family of compatible, live-environment, engagement capabilities that replicate weapon effects of all combat weapon systems in the conduct of collective training and testing. OneTESS will support force-on-force and force-on-target training exercises at brigade and below in all Battlefield Operating Systems at homestations, maneuver Combat Training Centers and deployed sites, and it will ultimately be embedded into all weapon systems.

Soldier Systems Integration Tactical Engagement Simulation System (SSI TESS)

MISSION

To address current training deficiencies and to provide a strategy to insert technologies as weapons and optical systems are upgraded.

DESCRIPTION

The SSI TESS leverages tactical and training device technologies to more accurately replicate weapons and systems effects in live force-on-force training. It focuses on equipment, weapons and tactics that Warfighters use to ensure that they are able to train as they fight. The goal of SSI TESS is to have training systems completely embedded into weapons systems. SSI TESS coordinates with external agencies dealing with Warfighter communications, personal

equipment, optics, ammunition and weapons. The strategy of implementing appended and then embedded capabilities is in concert with the OneTESS program to facilitate smooth and effective transition from laser-based training devices to geo-pairing, high-fidelity training devices. SSI TESS supports enabling capabilities of other programs within PM TRADE to bring incremental improvements in training. SSI TESS seeks solutions for weapons that could not be replicated in the past (including mortars, MK-19 and M203) and identifies ways of replicating the effects of new weapons and ammunition (STORM, XM110, XM25, XM307 and XM320).

MILES UCD/MCD

Stryker Anti-Tank Guided Missile (ATGM)

MISSION

To provide a MILES laser capability for the Stryker ATGM to replace the obsolete Field Tactical Trainer and be compatible with both Fire Control System and Common Processor Fire Control System in the Modified Independent Target Acquisition System.

DESCRIPTION

A MILES XXI solution is currently fielded to support MILES training for the Stryker ATGM variant. This solution does not meet the ATGM TOW launcher training requirement. MILES XXI equipment for the Bradley M2/ M3 will be leveraged to provide the capability needed.

ATGM

Stryker Multiple Integrated Laser Engagement System (MILES) XXI

MISSION

To provide nine of 10 Stryker variants with MILES training capability to include crew served weapons, MK-19 and below.

DESCRIPTION

Stryker MILES XXI provides a laser-based training device to realistically replicate casualty effects necessary for tactical engagement training during a direct fire, force-on-force training scenario. It allows organizational level training from platoon to brigade to train as a combined arms team at homestation and Combat Training Centers. Force-on-force maneuver training affords the brigade the means to train Soldiers on combat engagement skills using go-to-war weapon platforms in a safe environment. It provides realistic training without the expense and environmental impact of firing live ammunition. Stryker MILES XXI provides training capability to the following variants: Infantry Carrier Vehicle, Commander's Vehicle, Fire Support Vehicle, NBC Reconnaissance Vehicle, 120mm Mounted Mortar Carrier, Anti-Tank Guided Missile, Engineer Squad Vehicle, Medical Evacuation Vehicle and Reconnaissance Vehicle.

STRYKER MILES XXI

Stryker Anti Tank Guided Missile (ATGM) Stryker Tow Simulator (STS)

MISSION

To provide a Multiple Integrated Laser Engagement System (MILES) capability for the Stryker Anti-Tank Guided Missile (ATGM) vehicle. It replaces the obsolete Field Tactical Trainer (FTT) with a system that is compatible with both Fire Control Systems (FCS).

DESCRIPTION

The STS works in conjunction with the vehicle Modified Improved Target Acquisition System (MITAS) and the MILES XXI training system. The STS has two major components; TOW Laser Device (TLD) stimulates the actual TOW missile round, and the TOW ATWESS Device (TAD) provides the visual and aural cues associated with the TOW missile when engaging targets. It is currently the only Force-on-Force trainer that accommodates the Common Processor.

Vehicle Instrument Interface Package (VIIP)

MISSION

To allow for real-time tracking, status and control capability for tanks, Stryker and Bradley fighting vehicles on instrumented ranges.

DESCRIPTION

The VIIP provides the communications interface between vehicles and the instrumentation systems at maneuver Combat Training Centers (CTC) and the Alaska Range, Homestation Instrumentation Training System (HITS), Deployable Instrumented Training System (DITS) and Deployable System for Training and Readiness (DSTAR). The VIIP appends to vehicles and allows for simulated direct and indirect-fire engagements. The VIIP instruments tanks, Bradleys and Strykers using the Multiple Integrated Laser Engagement System (MILES) XXI, the Mobile Gun System Tactical Engagement Simulation System (MGS TESS), the Tank Weapon Gunnery Simulation System (TWGSS) or Precision Gunnery System (PGS). VIIP provides brigade commanders and training exercise managers exercise oversight and capability for comprehensive after action review production.

Product Manager Combat Training Instrumentation Systems (PM CTIS)

Alaska Training Range Evolution Plan (ATREP)

MISSION

To field an instrumentation training capability tailored for the 1/25 Separate Infantry Brigade (SIB) and other units training in the Pacific Alaska Range Complex in Alaska.

DESCRIPTION

A congressionally-funded program, ATREP delivers instrumentation system capabilities connecting various training range assets on the Alaskan Peninsula, to include the Yukon Training Area, Digital Multi-Purpose Training Range and Battle Area Complex. ATREP supports Army, joint and coalition components for ground and air-to-ground training in live, virtual and constructive domains. Assets/components delivered over the last five years support Army training in support of Red Flag Alaska and Northern Edge Exercises as well as for ground training of platoon through brigade-size maneuver units in any type environment.

STS TAD

VIIP

Combat Training Center Objective Instrumentation System (CTC OIS)

MISSION

To enhance the ability of the Combat Training Centers to conduct force-on-force, live-fire and full-spectrum operations in the contemporary operating environment and combined arms training by allowing the collection of engagement data for analysis and after action review production.

DESCRIPTION

CTC OIS modernizes the Instrumentation System (IS) at the National Training Center (NTC), Fort Irwin, CA and Joint Readiness Training Center (JRTC), Fort Polk, LA with one that meets the Army's existing and future advanced collective training objectives. It provides core IS software and hardware upgrades to the current IS to facilitate training at the maneuver CTCs. It provides an integrated system of computer software and hardware, workstations, databases, voice and video recording, production and presentation equipment, interface devices, and communications systems. CTC OIS is scalable to collect, report, store, manage, process and display event data for 10,000 instrumented players and 100,000 constructive entities. CTC OIS is a key part of the Live Training Transformation – Family of Training Systems (LT2-FTS) and is based on the Common Training Instrumentation Architecture (CTIA). It allows leveraging of advanced technology in a modular and component-based manner. The CTIA provides the foundation for common components across the live training product line. Common components such as exercise planning, exercise preparation, exercise control, after action review preparation and presentation in concert with CTIA services, processes, rules and standards support the full spectrum of training. CTC OIS is interoperable with other external systems through DIS, HLA or TENA protocols.

ATREP

CTC OIS

PM TRADE

Project Manager Training Devices

Exportable Training Capability – Instrumentation System (ETC-IS)

MISSION

To provide a mobile, deployable, training system capable of supplementing Combat Training Center rotations with live, instrumented, brigade combat team size exercises at homestations.

DESCRIPTION

The ETC-IS is an Army Battle Command System centric "system of systems" that includes integrated computer software and hardware, workstations, databases, voice and video recording, production and presentation equipment, and interfaces capable of providing CTC-like training. The ETC-IS provides exercise planning, exercise management, training performance feedback and collection of Tactical Engagement Simulation data and includes an observer controller communication system. ETC-IS is a key part of the Live Training Transformation – Family of Training Systems (LT2-FTS) and allows leveraging of advanced technology in a modular and component-based manner.

Homestation Instrumentation Training System (HITS)

MISSION

To provide a centrally-funded, homestation-instrumented training system consistent throughout the Army; to supply homestations with a standard instrumentation system that will interoperate with existing and future capabilities.

DESCRIPTION

HITS supports collective maneuver training for platoon-through-battalion units. By integrating with future and legacy Tactical Engagement Simulation, HITS provides position location and weapons effects data for real-time exercise monitoring and after action review capability. HITS supports force-on-force and force-on-target training across the full spectrum of operations at a security level up to Secret System High. The HITS is part of the Live Training Transformation – Family of Training Systems (LT2-FTS) and is based on the Common Training Instrumentation Architecture (CTIA). The CTIA provides the foundation for common components across the live training product line. Common components such as exercise planning, exercise preparation, exercise control, after action review preparation and presentation in concert with CTIA services, processes, rules and standards support the full spectrum of training. HITS is interoperable with other external systems through DIS, HLA or TENA protocols.

Initial Homestation Instrumentation Training System (I-HITS)

MISSION

To provide a homestation, instrumented, live training system for force-on-force collective training using COTS/NDI components to sites in Korea, Hawaii and Fort Bliss.

DESCRIPTION

I-HITS allows commanders to train at homestation in preparation for either CTC rotations or deployments and to sustain a higher level of proficiency between or during deployments. I-HITS aligns unit trainer observer/controller functions for exercise planning, control, and AAR with unit management, training and warfighting functions. I-HITS is not intended to replace or compete with brigade/battalion task force training at the maneuver Combat Training Centers or higher headquarters exercises at the Battle Command Training Program. Rather, it builds on the proven CTC train – assess – train model, to enhance Warfighting capabilities and mission readiness. Unit commanders will use objective data collected during realistic exercises and after action review feedback to increase collective battle and supporting task (per appropriate Mission Essential Task List) proficiencies at homestation to maximize the CTC experience, prepare for actual deployments, rehearse tactical missions and reconstitute units.

ETC-IS

HITS

JRTC OCCS

Joint Readiness Training Center (JRTC) OCCS P25 Radio System

MISSION

To procure, install, integrate and support a Project 25 (P25)-compliant, narrow-band Observer Controller Communications System (OCCS) at the JRTC in order to replace the existing EDACS OCCS, meet the National Telecommunications and Information Administration (NTIA) mandate, and satisfy the DoD policy for P25 compliance.

DESCRIPTION

The JRTC OCCS P25 is a land-mobile, 12.5 Khz channel narrow-band radio system that replaces the conventional 25 Khz channel EDACS system. The system will be transparently interoperable with the existing EDACS OCCS system enabling a phased replacement of the non-compliant system.

National Training Center Fiber Optic Network (NTC FON)

MISSION

To expand the current FON infrastructure in training and maneuver areas to support current and future training systems.

DESCRIPTION

The FON provides state-of-the-art communications infrastructure including more than 350 miles of fiber-optic cable connecting

National Training Center Fiber Optic Network (NTC FON) *(Continued)*

Military Operations in Urban Terrain sites, Forward operating bases, after action review sites and instrumentation system cell spurs with the NTC Operations Group, Directorate of Information Management and outside agencies.

The network includes multiple configurable communications paths with all infrastructure digitally mapped for core instrumentation system monitoring.

Opposing Forces (OPFOR) Surrogate Training System-Main Battle Tank (OSTS-MBT)

MISSION

To replace the currently employed OPFOR M551 Sheridan Tank and M60A3 tank surrogate vehicles with a more realistic threat representation of a Main Battle Tank that costs less to operate and maintain at the maneuver Combat Training Centers.

DESCRIPTION

The OPFOR OSTS-MBT uses an M113A3 chassis from excess M901 ITVs with M2A2 Bradley Fighting Vehicle turret drive components. It has Visual Modifications on the nose, side and turret of the vehicle to simulate the look of an opposing forces vehicle. The MBT also contains a Simulated Mine Clearing System and AN/VSG-2 tank thermal sight, M32E1 sights and an AN/VVS-2 driver's night viewer.

Product Manager Digitized Training (PM DT)

Battlefield Effects Simulator (BES)

MISSION

To simulate the flash/bang of a weapon's discharge and impact in force-on-target live training.

DESCRIPTION

BES consists of the Omega 60 simulator system, the XM34 cartridge and the XM35 cartridge. The Omega 60 simulator system is a training device that ignites pyrotechnic cartridges on command. The XM34 cartridge produces the flash and sound of tank gunfire. The XM35 cartridge produces the sound-and-flash simulating impact of a round on an armor target. The Omega 60 can be installed either at stationary range positions in conjunction with target mechanism or mounted on a moving target platform.

Combat Training Center Military Operations on Urban Terrain Instrumentation System (CTC MOUT-IS)

MISSION

To provide MOUT video instrumentation and supporting infrastructure in the CTCs to support urban operations training events.

DESCRIPTION

The CTC MOUT-IS is designed to provide individual Soldier through Brigade-level urban operations training. This system provides state-of-the-art urban training facilities capable of training today's Soldiers in a realistic urban environment to ensure Soldiers are prepared to conduct full-spectrum operations in any urban environment. This system monitors and controls the training exercise, processes, and displays and analyzes collected exercise data, prepares and presents standardized training performance feedback and archives training performance information for external use.

OSTS-MBT

BES

Digital Range Training Systems (DRTS)

MISSION

To provide new and modern ranges capable of training, evaluating and stressing today's Soldiers and their modern equipment with a realistic train-as-you-fight environment.

DESCRIPTION

The instrumented range is a live, virtual and constructive gunnery and tactical training complex. It provides individual, crew, platoon, and Combined Arms Live-Fire Exercise that incorporates digital information systems. DRTS provides the infrastructure for Abrams, Bradley and Stryker live-fire gunnery qualifications. DRTS ranges are capable of supporting convoy live-fire exercises for all tactical vehicles. This is accomplished by providing four generic training systems: DMPRC, DMPTR, BAX & DAGIR. They will utilize all available combat systems capabilities and digitally integrate them to manage all forces undergoing individual, collective live-fire training and qualification. These training systems will replace obsolete, inadequate training methods and equipment in order to stimulate new weapon systems, stress Warfighters, incorporate the Digitized Force, and provide enhanced training data collection and After Action Review (AAR) capabilities. They will incorporate digital system training as well as integrate multiple ranges and training environments for the training units. DRTS also offers scalable range systems that are designed based on needs and funding capabilities. DRTS is an evolutionary system of systems rather than a revolutionary end state.

DRTS

FTI

PM TRADE

Project Manager Training Devices

Fixed Tactical Internet (FTI)

MISSION

To provide digital communications support and equipment for digitized units at brigade-and-below forces at homestation.

DESCRIPTION

The Fixed Tactical Internet (FTI) is a semi-permanently installed network of enhanced position location and reporting system radio sets that provide an alternative means for on-demand digital communications to support training, testing, maintenance and experimentation. The FTI provides a means of injecting simulation into the tactical Command, Control, Communications, Computers and Information (C4I) environment.

Integrated Military Operations on Urban Terrain (MOUT) Training System (I-MTS)

MISSION

To help Warfighters hone their skills in urban terrain environments and enhance their ability to complete their wartime mission.

DESCRIPTION

MOUT I-MTS consists of three training facilities/systems. The Urban Assault Course, Shoot House and Combined Arms Collective Training Facility are designed to provide individual Soldier through Battalion-level homestation, urban-operations training. These training facilities allow units to train Warfighters on building entry and room clearing techniques under live and blank-fire conditions. These I-MTS urban training facilities are located across Army, Army Reserve and National Guard installations to ensure Soldiers are prepared to conduct full-spectrum operations in any urban environment. By providing state-of-the-art urban training facilities capable of training today's Soldiers in a realistic urban environment, the Army ensures Soldiers have the highest level of urban training short of combat. Lessons are learned on the training ground and not in battle. These systems monitor and control the training exercise, process, display and analyze collected exercise data, prepare and present standardized training performance feedback and archive training performance information for external use.

Mobile Military Operations on Urban Terrain (Mobile MOUT) Training System

MISSION

To provide a rapidly fielded, deployable urban operations training system that allows Warfighters to improve their tactics, techniques and procedures and to conduct mission

rehearsals practicing force-on-force or force-on-target while utilizing Multiple Integrated Laser Engagement System (MILES), blanks, man-marker rounds or Short-Range Training Ammunition.

DESCRIPTION

Mobile MOUT is a transportable urban combat training system consisting of reconfigurable shipping containers assembled into urban structures. Urban structures are fitted with audio/video instrumentation systems, exercise control and monitoring, and after action review presentation capability. Urban structures can be multi-story with interior/ exterior stairwells and may include balconies and trap doors leading to subterranean storage areas or tunnel complexes. In its fully instrumented configuration, the system allows realistic battlefield effects (smoke, sounds, smells, pyrotechnics, etc.) and provides video and audio of Warfighters being trained to allow for rapid AAR.

I-MTS

BOO

PEO STRI Business Operations Office

Introduction

The Business Operations Office (BOO) is focused on designing and implementing policies and procedures across the PEO that provide an efficient environment for the core business units to produce interoperable products and services for our Army. The BOO is responsible for PEO finances, human resources, acquisition management oversight, strategic planning and organic PEO staff support.

Acquisition Management Support

The Acquisition Management Support team is responsible for responding to Department of the Army tasks and questions, maintaining PEO and Department of the Army databases, providing support to the PEO and PMs on acquisition requirements and current status, and preparing budget justifications to Department of the Army, Office of the Secretary of Defense and Congress.

The main areas of responsibility include:

- Program Reporting
- Acquisition Management Oversight
- Assistant Secretary of the Army (Acquisition, Logistics and Technology) Liaison
- Budget Justification

Funds, Planning and Integration

The Funds, Planning and Integration team continuously seeks to improve business processes and procedures by focusing on credible, streamlined, accountable and responsive support to the Warfighter. The principal functional areas include:

- PEO Operating Fund Execution
- PEO Business Review
- Strategic Planning
  - Ends, Ways, Means
  - Lean Six Sigma
- Training Support System Integration
  - Non-System/System Training Aids, Devices, Simulators and Simulations
  - Weapons System Review

Personnel Resources

The Personnel Resources Management group is responsible for providing proactive, user-focused, innovative and efficient support to the PEO STRI leaders and mangers. Human resource management encompasses all facets of civilian and military personnel life-cycle management from manpower allocations to recruitment and personnel acquisition to managing training requirements. The core areas of responsibility include:

- Civilian and Military Personnel Management
- Manpower Business Processes
- Civilian and Military Performance Management
- Time and Attendance
- Staffing Plan
- Training

PEO Infrastructure Support

The PEO Infrastructure Support group provides accurate, relevant and responsive support for PEO STRI operations. The team assists in areas throughout the entire organization to advance the PEO STRI mission and provide support to the workforce. The primary functional areas include:

- Public Affairs
- Protocol
- Security
- Facilities, Mail, Property Book
- Credit Card, Travel
- Management Controls
- Freedom of Information Act

CIO

PEO STRI Corporate Information Office

Introduction

The Corporate Information Office's (CIO) mission is to provide responsive and trusted technology solutions that enable acquisition excellence for the Warfighter and the Nation. The CIO offers world-class support services for all of Information Technology (IT) Business Management needs to include Information Assurance (IA) and Systems Engineering (SE).

The CIO provides IT business system products and services within its four core competencies: IT Business Management, SE, IA and Information Management. This includes project management, network engineering, asset acquisition and management, system maintenance, software development, customer support, sustainment and other services in support of the IT infrastructure. Customers include PEO STRI program offices, PEO STRI tenants and PEO STRI supported laboratories to include RDECOM and ADL Co-Lab. Most customers are located within the Central Florida Research Park campus in Orlando, FL; however, PEO STRI maintains two offices at Redstone Arsenal in Huntsville, AL, and field offices at numerous other military installations. In addition, the CIO supports the Fort Belvoir and Fort Carson DOIMs, NAVAIR PMA-262, ARL, ARI, JFCOM, Air Force, PEO Aviation, PEO Soldier, PEO EIS and many other organizations throughout the Department of Defense.

Whether managing large IT contracts or hosting enterprise systems on the Non-classified Internet Protocol Network (NIPRNET) and the Defense Research and Engineering Network (DREN), the CIO stands ready to support IT business and technical needs in support of the Warfighter.

Enterprise Business System (EBS) Development

The CIO oversees the development and deployment of PEO STRI's internal application, the Enterprise Business System (EBS), which is used to manage the complex business operations within PEO STRI. The system consists of seven modules: Human Resources, Program Management and Tracking, Financial Management, Legal/Timekeeping, Contracts, Engineering and CIO Services. EBS was designed to automate PEO STRI's business processes to assist management in making informed decisions regarding resource allocation. In addition, the system integrates with existing Army-level systems to provide PEO-level visibility and status of the business operations. The CIO will provide and implement a flexible and centralized business-based solution for the Program Managers Core Business Units, which will enable PEO-level rollup with reusable, maintainable and secure information. EBS was designed and developed in a Service-Oriented Architecture, thus allowing EBS services, in whole or in part, to be shared across the Army and DoD.

CIO

PEO STRI Corporate Information Office

Information Technology Business Management

MISSION

To provide efficient, world-class IT business services to the Army and DoD in support of the Warfighter.

DESCRIPTION

The CIO Business Office provides a full range of services to run an IT organization. These services include:

- Procurement of IT equipment, software, maintenance and cellular equipment
- Asset management
- IT support contract management and documentation
- Software licensing and hardware ordering support
- Finance management
- Quality assurance
- Configuration management

The CIO Business Office provides the tools and services required to be successful in today's DoD environment.

Cyber Security Services

MISSION

To provide the Cyber Security products and services for managing, enforcing and maintaining a formal Cyber Security program, while providing technical support in carrying out the program for the PEO and Army in support of the Warfighter.

DESCRIPTION

The Cyber Security Office provides direct guidance and consulting services while acting as a liaison to external Army and DoD Cyber Security/Information Assurance organizations. The office has developed tools, templates and products, such as the Basic Accreditation Manual (BAM), which consolidates many DoD and Army directives, instructions and regulations into one, easy-to-read document.

The many tools and templates developed and made available by the Cyber Security Office, simplify the DoD Information Assurance Certification and Accreditation Process (DIACAP) for program managers that are developing the PEO STRI systems.

The office also provides direct support to PMs and their contractors in the form of classroom and hands-on training in the Information Assurance Integration and Training Lab (IAITL). The training can range from DIACAP artifact generation, to hardening of a system, to scanning for vulnerabilities and analyzing the reports.

Finally, the Cyber Security Office provides direct support in ensuring that PEO STRI developed systems receive favorable accreditation decisions upon conclusion of the Certification & Accreditation (C&A) process. This is done by actively participating in the reviews that are conducted as a part of the system's development

as well as by tracking various DIACAP milestones and program metrics throughout the process to ensure that the C&A plan remains executable. The CIO Cyber Security Office also has close working relationships with Agents for the Certification Authority of the Army who assist in the completion of successful certification events.

System Engineering Office (SEO)

MISSION

To provide engineering support services to the Acquisition Community that will enable PEO STRI to maximize their business processes and productivity utilizing IT to achieve the Army's net-centric vision.

DESCRIPTION

The SEO provides a common point of contact and a systematic approach through guidance, tools and documentation review in support of PMs and their contractors in meeting the Army's interoperability, supportability and networthiness certification requirements.

The SEO provides subject matter expertise to the PMs in the development of the following DoD and/or Army acquisition life-cycle requirements: Certificate of Networthiness, Net-Ready Key Performance Parameters (NRKPP), Information Support Plans (ISP), Tailored Information Support Plans (TISP), Spectrum Management, Net-Centric Operational Warfare – Reference Models (NCOW-RM), IPv6 Deployment Support and Portfolio Management.

In addition, the SEO provides telecommunications as well as network and software expertise to product development teams in order to ensure milestone requirements are successfully achieved. When necessary, the SEO has the capability to function as the liaison between the PMs, DoD and Army certification agencies to facilitate the certification process.

The SEO stands ready to leverage the experience of the CIO and the organization's best practices to enhance the capabilities of PEO STRI's product development team.

Information Management

MISSION

To provide outstanding and secure network operations and customer service support to the PEO and its customers.

DESCRIPTION

Data Center Operations: The PEO STRI Data Center provides a secure, robust set of network, file-server and net-centric operations in support of PEO STRI and other CIO customers. Among

COMPUTER SYSTEM CHECK, CAMP TAJI, IRAQ

COMPUTER SERVER MAINTENANCE, DIWANIYAH, IRAQ

COMPUTER-AIDED TECHNOLOGIES TO IMPROVE SMALL ROBOTS

CIO

PEO STRI Corporate Information Office

the featured services are web-server, application and collaboration hosting to complement a feature-rich set of office automation services provided to the desktops of PEO STRI personnel. The state-of-the-art Data Center makes efficient use of blade servers, storage area networks, enterprise backup systems, backup power systems and the latest Microsoft products such as Exchange 2007, Microsoft Office SharePoint Services 2007 and Office Communications Services.

Network Infrastructure: PEO STRI provides a high-speed, all-optical network backbone to buildings and offices housing PEO STRI personnel in the Central Florida Research Park. As PEO STRI grows, new fiber strands with dark fiber growth capacity are installed in new locations. The backbone is powered by gigabit switches and 100Mb connections to the desktop. Wide area connections include a 45Mbps NIPRNET connection and a 9Mbps backup NIPRNET connection. A high-speed connection to the DREN is also available.

Desktop Support: Support to PEO STRI personnel is provided by both the Client Services Group, which provides hands-on technical support, and also by Network Operations, which provides automated delivery of software packages and patches. Updating of anti-virus software and anti-virus signature files is fully automated, as is the response to detection of infected software. PEO STRI users usually experience all software upgrades on a transparent basis. In addition, Client Services will assist personnel in identifying and procuring hardware and software required for their mission on a reimbursable basis.

Help Desk: The PEO STRI Help Desk stands willing to assist personnel on all their IT issues and should be the first contact made when problems are encountered with PEO STRI systems. The PEO STRI Help Desk enjoys an Initial Call Close Rate of more than 90%, one of the highest in DoD and industry.

System Training: Numerous training courses have been developed for PEO STRI and other customers. Most of the training courses are available on PEO STRI's intranet as well as formal instructor-led sessions, both on-and off-site. The training facility is available for IT training use by other PEO STRI organizations or outside organizations training PEO STRI personnel if scheduled sufficiently in advance.

Cellular Management Support: Wireless cellular and Blackberry services through several major carriers are available on a reimbursable basis. In addition, broadband wireless personal computer data cards are also available.

All of the Information Management products, services and facilities are available to any DoD organization.

CTO

PEO STRI Chief Technology Officer

Introduction

The mission of the CTO is to explore and experiment with new technologies that have potential to improve the PEO STRI products. The CTO may participate in Army, Office of the Secretary of Defense and joint committees and reviews on modeling, simulation, and testing. The CTO provides technical guidance and advice to PEO STRI programs. The CTO is also charged with being an active participant in the training, simulation and testing professional communities.

Mission

To act as the technology eyes and ears of the PEO, the CTO participates in a number of government and industry events in order to present the PEO's perspective and message to the community and to collect relevant information about technologies that may be valuable to future STRI systems.

To engage with government and industry product providers to discuss how their products can be used for Army training and testing needs and to explore enhancements that could increase their value to the PEO.

To build partnerships across DoD. The CTO is involved in building bridges to these organizations for the purposes of two-way sharing of valuable technologies.

To promote and support experimentation into relevant new technologies.

To serve PEO STRI program managers with technical expertise and knowledge of external resources.

Focus Areas

A number of interesting technologies may offer significant improvements for future training and testing systems. Current focus areas are:

1) Simulation as a Service. Identifying and developing methods to deliver training to Soldiers who are deployed around the globe. These services can be delivered to any standard military computer without resorting to dedicated hardware or the transport of Soldiers to dedicated facilities for training. This area leverages the growing power of networks, desktop computers and web browsers to create a service that is accessible to all Soldiers from any machine, any place on the planet.

2) Interactive HPC. High Performance Computers have typically been reserved for large analytic problems. These computers are generally not designed for real-time human interaction. The goal is to apply the power of an HPC to an interactive training event by structuring the hardware and software so that it can communicate with multiple users in real-time.

3) Medical Simulation. PEO STRI is expanding into medical training simulations, devices and programs for combat medics, combat lifesavers and eventually military surgeons and nurses. The CTO is working with these programs and the

Focus Areas

(Continued)

external medical communities to stimulate the growth of this new area.

4) Game Technology. PEO STRI is leveraging the computer science within electronic games to create training systems for Soldiers. The military is currently the leading supporter of the "serious games" business, and there remains a great deal of opportunity to create powerful training tools in this area.

5) Web 2.0. These technologies can potentially be used in the preparation and analysis of data for military training events. The collaborative, user-generated content creation tools that make up Web 2.0 application may reduce the costs associated with exercise preparation, data collection and staff support.

PSG

PEO STRI Project Support Group

Introduction

The mission of the PSG is to be the force provider for PEO STRI and to ensure that the PEO STRI workforce has the proper skills, processes, procedures and tools to efficiently and successfully accomplish the mission of PEO STRI.

PEO STRI recruits some of the best and brightest talent across the Department of Defense, other agencies and industry. The PSG actively participates in a Student Career Experience Program, a Student Temporary Employment Program, the Army Career Intern Program, the Historically Black Colleges University Program and the Student Training and Recruitment (STAR) Co-Operative Education Program with the University of Central Florida. The STAR program is unique because the PSG hires students across multiple degrees of study to support our needs for engineering, finance, contracting and acquisition logistics skills. PEO STRI has a very active employee development program, and won the OSD Workforce Development Award (Bronze) in 2004.

Engineering Directorate:

MISSION

To provide an agile, highly-efficient technical workforce that ensures the technical relevance and superiority of training and testing solutions across the acquisition life-cycle to support the needs of the Warfighter.

GOALS

- Horizontal Technical Integration (HTI) Integration and Interoperability (I2)
- Technology Investment and Transition Goal: Facilitate the insertion and transition of research and innovation that has the potential for high impact in meeting the Army's M&S needs
- Technical Management for Customers
  - Organizational Excellence
    - Effectively organize the directorate to provide agile, multi-disciplinary technical and leadership expertise to the PEO
    - Front-end analysis
    - Technical program execution
    - Sound Systems Engineering foundations
  - Processes, procedures
- Technical/Acquisition Education and Workforce Development: Provide opportunities for advanced technical and professional training and education

To support of the mission and goals of the PEO, the Engineering Directorate takes an active role in identifying the state-of-the-art for application to the PEO's development programs. PSG evaluates the future program requirements and identify technology gaps in achieving these requirements. We monitor industry's and academia's research and development activities, and work to influence their efforts to support PEO STRI's future technology needs. PSG continuously reviews these gaps with respect to the Army's technology needs to support training and testing and evolve our focus areas to ensure PEO STRI is providing innovative solutions to the Warfighter.

PSG

PEO STRI Project Support Group

Finance Directorate:

MISSION

To provide a workforce to PEO STRI project managers and customers to execute and manage financial processes to ensure coordination of financial matters. These include the Planning, Programming, Budget and Execution System (PPBES) functions across all years (prior, current, and future), time/attendance/ payroll system control, accounting functions, independent cost analyses, program support and resource-related automation tools and the development of standardized processes, procedures, guidance and training for budget, cost, program and systems analysts.

GOALS

In order to achieve this ultimate organizational success, our focus must be on creatively delivering and transitioning financial management solutions to ensure that:

- Our customers achieve a competitive advantage utilizing a mission-driven workforce that we provide at the right time and at the least cost
- Our customers' expectations about the quality of the workforce provided are met and often exceeded
- Our customers regard our employees as knowledgeable, helpful, competent and committed to their mission
- Our customers clearly understand the emerging mission strategy so that they can achieve improved mission performance, decision making and quality
- Our customers think of us first as their force provider when existing and future business requirements arise

Acquisition Logistics Directorate:

MISSION

To focus on reducing total life-cycle costs of systems by implementing cutting-edge techniques and performance-based logistics processes; to ensure that PEO STRI maintains a cadre of highly-trained acquisition logisticians to satisfy the common needs of the project managers and customers.

GOALS

- Influence system design, reduce total ownership costs and logistics footprint, identify life-cycle support requirements, procure and deliver suitable logistics documentation, support items and services for all PEO STRI acquisition programs
- Technical/acquisition education and workforce development
- Provide opportunities for technical and professional training and education
- Attain appropriate DAWIA levels of certification

Doing Business with PEO STRI

www.peostri.army.mil

The first option is to visit our website. Once there, you will find information about PEO STRI, its organization, products and services contained in this catalog, information about business opportunities and more.

(407) 384-3773 (DSN 970)

The second option is to call the PEO STRI Customer Service number. You will be prompted to leave your contact information. Once the information is received, a member of the Customer Support Group will review it and forward it to the appropriate project manager for action.

Technical Industrial Liaison Office (TILO)

The TILO is the point of contact between industry and PEO STRI, and provides guidance to streamline the exchange of information. We assist our partners in industry with doing business with the government. We can provide an overview of PEO STRI's mission, goals, structure and acquisition processes along with insight for short and long term business opportunities. It is advantageous for PEO STRI to provide this assistance so that our industry partners can effectively apply its resources in developing materiel necessary to support the national defense effort.

We depend on the industrial sector to provide material acquisition and services. By providing information to industry on our needs, we gain access to existing and emerging technologies and benefit from increased competition. In return, industry can effectively apply its resources in developing the material and weapons necessary to support the national defense effort. Following a review of a company's capabilities by the TILO, the company's information will be provided to the PEO STRI community for further consideration.

E-mail TILO at customerliason@peostri.army.mil

Glossary of Acronyms

21C TCS – 21st Century Target Control Program
3CE – Cross Command Collaborative Effort
3D – Three-Dimensional
AAR – After Action Review
AAV – Amphibious Assault Vehicle
ABCS – Army Battle Command System
ABCTM – Army Brigade Combat Team Modernization
ABHFS – Additional Blackhawk Flight Simulator
ACR – Advanced Concepts and Requirements
ADA – Air Defense Artillery
ADL Co Lab – Advanced Distributed Learning
ADMO – Apache Distributed Mission Operations
AEC – Automated Electronic Classrooms
AFATDS – Advanced Field Artillery Tactical Data System
AFRL – Air Force Research Lab
AGTS – Advanced Gunnery Training System
A&I – Architecture and Integration
AKE – Army Knowledge Enterprise
ALT – Advanced Learning Technologies
ARFORGEN – Army Force Generation
ARI – Army Research Institute
ARL – Army Research Laboratory
ASV MILES – Armored Security Vehicle Multiple Integrated Laser Engagement System
ATC – Aberdeen Test Center
ATC – Air Traffic Control
ATEC – U.S. Army Test and Evaluation Command
ATGM – Anti-tank Guided Missile
ATSC – Army Training Support Center
ATWESS – Anti-Tank Weapon Engagement Simulation System
AVCATT – Aviation Combined Arms Tactical Trainer
AWSS – Aerial Weapons Scoring System
  AWSS-LBA TESS – AWSS with Longbow Apache TESS
B1D1 – Build 1 Drop 1
B1D2 – Build 1 Drop 2
BAA – Broad Agency Announcement
BAM – Basic Accreditation Manual
BATS – Ballistic Aerial Target –Systems
BATS – Bradley Advanced Training Systems
BAX – Battle Area Complex
BC – Battle Command
BCID – Battle Command Integration Directorate
BCT – Brigade Combat Team
BCTB – Battle Command Training Branch
BCTC – Battle Command Training Center
BCTC-ES – Battle Command Training Capability-Equipment Support
BCTM – Brigade Combat Team Modernization
BCTP – Battle Command Training Program
BEAMR – Baseline Evaluation and Augmentation of Multispectral Mobile Ground Target System Radar Cross Section
BEMT – Basic Electronics Maintenance Trainer
BES – Battlefield Effects Simulator
BOIP – Basic of Issue Plan
BOO – Business Operations Office
BOS – Battlefield Operating System
BSC – Battle Simulation Center
BST – Basic Skills Trainer
BVS – Battlefield Visualization System
C&A – Certification and Accreditation
C2 – Command and Control
C3 – Command, Control and Communications
C4I – Command, Control, Communications, Computer, Information
  C4ISR – C4 Intelligence, Surveillance, and Reconnaissance
CAAS – Common Avionics Architecture System
CACTF – Combined Arms Collective Training Facility
CAD – Course Administrative Data
CADTS – Contamination Avoidance Detector Test Suite
CAF – Combat Air Force
CALFEX – Combined Arms Live-Fire Exercises
CAP – Common Avionics Package
CAS – Close Air Support
CATS – Combined Arms Training Strategies
CATT – Combined Arms Tactical Trainers
C/B – Chemical/ Biological
CBS – Corps Battle Simulation
CBCSE – Common Battle Command Simulation Equipment
CCI – Consolidated Contracting Initiative
CCS – Cloud Characterization System
CCTT – Close Combat Tactical Trainer
CDA – Common Digital Architecture
CDB – Common Database
CDD – Capability Development Documents
CDT MRAP – Common Driver Trainer MRAP
CDT/SV – Common Driver Trainer/Stryker Variant
CFFT – Call for Fire Trainer
CGA – Common Gunnery Architecture
CGF – Computer Generated Force
CGS – Cloud Generation System
C-IED – Counter-Improvised Explosive Device
CIO – Corporate Information Office
CIU – Counter measure Indicator Unit
CLS – Combat Life-Saver
CMAST – Combat Medical Advanced Skills Training
CMS – Combat Mission Simulator
CNA – Computer Network Attack
CND – Computer Network Defense
CNE – Computer Network Exploitation
CNO – Computer Network Operations
CoE – Center of Excellence
COE – Common Operational Environment

COE – Contemporary Operating Environment
COFT-E – Conduct of Fire Trainer-Enhanced
CONSIM – Constructive Simulation
COP – Common Operating Picture
COTS – Commercial-Off-The-Shelf
CP – Command Post
CPD – Capability Production Documents
CP-FCS – Common Processor Fire Control System
CPM – Consolidated Product-Line Management
CPV – Commander's Panoramic Viewer
CPX – Command Post Exercise
CQC – Close Quarters Combat
CREW2 – Counter Radio-controlled IED Electronic Warfare 2
CSG – Customer Support Group
CTC – Combat Training Center
CTC-OIS – CTC Objective Instrumentation System
CTEIP – Central Test and Evaluation Investment Program
CTIA – Common Training Instrumentation Architecture
CTL – Collective Training List
CTO – Chief Technology Officer
CTSF – Central Technical Support Facility
CV – Commander's Vehicle
CVC – Common Virtual Components
CVE – Common Virtual Environment
DCRA – Data Collection, Reduction and Analysis
DAGIR – Digital Air Ground Integration Range
DE – Directed Energy
DETEC – Directed Energy Test & Evaluation Capability
DET S&T – Directed Energy Test Science & Technology
DF – Direction Finding
DFCS – Drone Formation Control System
DIACAP – DoD Information Assurance Certification and Accreditation Process
DIL – Digital Integration Laboratory
DITS – Deployable Instrumented Training System
DIS – Distributed Interactive Simulation
DMN – Digital Migration Network
DMON – Distributed Mission Operations Network
DMPRC – Digital Multi-Purpose Range Complex
DMPTR – Digital Multi-Purpose Training Range
DMT – Distributed Mission Training
DNM – Digital Network Migration
DOD – Department of Defense
DOIM – Directorates of Information Management
DRA – Data Reduction and Analysis
DREN – Defense Research and Engineering Network
DRP – Deployable Range Packages
DRTS – Digital Range Training Systems
DSGL – Distributed Scenario Generation Lab
DSTAR – Deployable System for Training and Readiness
DTT – Desktop Trainer
DTT – Diagnostic and Troubleshooting Trainers
DVED – Database Virtual Environment Development
EA – Electronic Attack
EAATS – Eastern Army National Guard Aviation Training Site
EBS – Enterprise Business System
ECID – Electronic Common Interface Device
ECM – Electronic Countermeasure
EDACS – Enhanced Digital Access Communication System
EI – Engineering Iterations
ERC – Environmental Runtime Component
ERETS – Enhanced Remote Equipment Target System
ERF – Entity Resolution Federation
ERS – Engine Room Simulator
EST – Engagement Skills Trainer
ESV – Engineer Squad Vehicle
ET – Embedded Training
ETC-IS – Exportable Training Capability-Instrumentation System
EW – Electronic Warfare
FASIT – Future Army System of Integrated Targets
FBCB2 – Force XXI Battle Command Brigade-and-Below
FCS – Future Combat Systems
FDC – Fire Direction Center
FFS – Future Force Simulation
FCS – Fire Control System
FITE – Future Immersive Training Environment
FMS – Foreign Military Sales
FO – Forward Observers
FOCUS – Field Operations Customer Support
FOV – Field-of-View
FON II – Fiber Optic Network
FS – Fire Support
FS – Flight School
FS – Flight Simulators
FSCATT – Fire Support Combined Arms Tactical Trainer
FSV – Fire Support Vehicle
FTI – Fixed Tactical Internet
FTT – Field Tactical Trainer
GEOINT – Geospatial Intelligence
GIG – Global Information Grid
GIS – Geospatial Information System
GUI – Graphical User Interface
GWOT – Global War on Terrorism
HBCU/MI – Historically Black Colleges & Universities and Minority Institutions
HCA – Head of Contracting Authority
HCC – HUMINT Control Cell
HCT – Howitzer Crew Trainer
HEAT – HMMWV Egress Assistance Trainer
HEL – High Energy Laser
HIMARS – High Mobility Artillery Rocket System
HISS – Helicopter Icing Spray System
HITS – Homestation Instrumentation Training System
HLA – High-Level Architecture
HMMWV – High-Mobility Multi-purpose Wheeled Vehicle
HPC – High Performance Computer
HPM – High Power Microwave
HQDA – Headquarters Department of the Army
HSI – Human Systems Integration
HTI – Horizontal Technical Integration
HUBZone – Historically Underutilized Business Zone
I2 – Integration and Interoperability
IA – Information Assurance
IAITL – Information Assurance Integration and Training Lab
IAP – Integrated Avionics Program
ICV – Infantry Carrier Vehicle
ID – Interrupt Device
IDAGTS – Interim Deployable Advanced Gunnery Training Systems
ID/IQ – Indefinite Delivery/Indefinite Quantity
IDS – In-bore Device System
IED – Improvised Explosive Devices
IEDES – IED Effects Simulator
IETM – Interactive Electronic Technical Manual
IEWTPT – Intelligence Electronic Warfare Tactical Proficiency Trainer
IF – Indirect Fire
IFR – Instrument Flight Rules
ITAS – Improved Target Acquisition System
IHITS – Initial Homestation Instrumentation Training System
IMI – Interactive Multi-media Instruction
IMO – Instrumentation Management Office
IMT – Integrated Management Team
I-MTS – Integrated-Military Operations on Urban Terrain Training System
IO – Information Operations
IOS – Instructor Operator Station
IPT – Integrated Product Team
IS – Instrumentation System
ISD – Instructional System Design
ISP – Information Support Plans
ISR – Intelligence, Surveillance and Reconnaissance
ISS – Instruction Support System
IT – Information Technology
ITAS-TESS FTS – Improved Target Acquisition System – Tactical Engagement Simulation System Field Training System
ITTS – Instrumentation Targets and Threat Simulators
IW – Information Warfare
IWF – Intelligence, Warfighting Function
IWS – Individual Weapon System
JAAR-RL – Joint After Action Review-Resource Library
JAAT – Joint Air Attack Team
JATS – Joint Architecture & Technical Standards
JC3IEDM – Joint Consultation Command and Control Information Exchange Data Model
JCAS – Joint Close Air Support

JCOM – Joint Composable Object Model
JCTD – Joint Capabilities Technology Demonstration
JDIF – Joint Development Integration Facility
JDLM – Joint Deployment Logistics Model
JEEI – Joint Exercise and Experimentation Integration
JFCOM – Joint Forces Command
JFETS – Joint Fires and Effects Trainer System
JFO – Joint Fires Observers
JFPL – Joint Fires Product Line
JIIM – Joint, Intergovernmental and Multinational
JITC – Joint Interoperability Test Command
JLCCTC – Joint Land Component Constructive Training Capability
- **JLCCTC-ERF** - JLCCTC Entity Resolution Federation
- **JLCCTS-MRF** - JLCCTC Multi Resolution Federation

JLVC – Joint Live, Virtual, Constructive
JNTC – Joint National Training Center
JRSG – Joint Rapid Scenario Generation
JRTC – Joint Readiness Training Center
JTAC – Joint Terminal Attack Control
JTF – Joint Task Force
JTRG – Joint Training Review Group
JWTTC - Joint Warfighter Test and Training Capability
LAN – Local Area Network
LASAR – Light Assault/ Attack Reconfigurable
LBA TESS – Longbow Apache Tactical Engagement Simulation System
LC – Live and Constructive
LCCS – Life-Cycle Contractor Support
LCTM – Low Cost Target Mover
LFXs – Live-Fire Exercises
LIDAR – Light Detection and Ranging
LMS – Learning Management Systems
LMTS – Laser Markmanship Training System
LOGFED - Logistics Federation
LSI – Lead Systems Integration
LSMP – Lift Simulation Modernization Program
LSVTC – Land and Sea Vulnerability Test Capability
LTA – Local Training Areas
LT2-FTS – Live Training Transformation-Family of Training Systems
LT-TES – Live Training-Tactical Engagement Simulation
LVC – Live, Virtual, and Constructive
- **LVC-IA** – LVC Integrating Architecture
- **LVC SE** – LVC Simulation Equipment

MAIS – Mobile Automated Instrumentation Suite
MANPADS – Man – Portable Air Defense System
M&S – Modeling and Simulation
MCA – Military Constructive, Army
MC-B – Mounted Mortar Carrier
MCTC – Maneuver Combat Training Centers
MCU – Module Control Unit
MDI – Miss Distance – Indicator
MDT – Mine Detonation Trailer
MET – MRAP Egress Trainer
MeTER – Medical Training Evaluation and Review System
METL – Mission Essential Task List
MEV – Medical Evacuation Vehicle
MGS – Mobile Gun System
- **MGS TESS** – Mobile Gun System Tactical Engagement Simulation System

MGT – Mobile Ground Targets
MGTH – Mobile Ground Target Hardware
MGTO – Mobile Ground Target Operations
MI – Master Interface
MIDAS – Modified Independent Target Acquisition System
MILES – Multiple Integrated Laser Engagement Simulation
- **MILES CVS** – MILES Combat Vehicle System
- **MILES ITS/WITS** – MILES Independent Target System/Wireless Independent Target System
- **MILES IWS** – MILES Individual Weapon System
- **MILES SLM** – MILES Shoulder Launched Munitions

MITAS – Modified Improved Target Acquisition
MMPV – Medium Mine Protected Vehicle
MMTS – Mobile Multi-sensor Time-Space-Position Information System
MOA – Memorandum of Agreement
MOS – Military Occupational Specialty
MOSS – Microsoft Office Sharepoint Services
MOUT – Military Operations on Urbanized Terrain
- **MOUT-CT** – Military Operations on Urbanized Terrain and Cultural Training

MPCV – Mine Protected Clearance Vehicle
MPRC – Multipurpose Range Complex
MRAP – Mine Resistant Ambush Protected
MRF – Multi-Resolution Federation
MRTFB – Major Range and Test Facility Base
MRTS – Mission Rehearsal and Training Support
MSC – Major Subordinate Commands
MSDL – Military Scenario Development Language
MSTC – Medical Simulation Training Centers
MT-C2 – Medical Training Command and Control
MTP – Management and Transition Plan
MTPS – Mission Training and Preparation Systems
MTRS – Man Transportable Robotic Systems
MTS – Maintenance Training System
MT-SAV – Metal Target Surrogate Analysis and Validation
NBCRV – NBC Reconnaissance Vehicle
NCOW-RM – Net-Centric Operational Warfare – Reference Models
NDI – Non-Developmental Item
NESTS – Networked Electronic Support Threat Sensors
NETT – Network Exploitation Test Tool
NGATS – New Generation Army Target Systems
NIPRNET – Non-Classified Internet Protocol Network
NOC – Network Operations Center
NR-KPP – Net-Centricity, Net-Ready-Key Performance Parameters
NTC – National Training Center
- **NTC FON** – NTC Fiber Optic Network

NTIA – National Telecommunications and Information Administration
NSTD – Non System Training Device
O/C – Observer/Controller
OASIS-EIS – Operation Test Command Analytic Simulation and Instrumentation Suite – Enterprise Integration Systems
OCCS – Observer Controller Communications System
OCS – Office Communication Services
ODS – Operation Desert Storm
OFDM – Orthogonal Frequency Division Multiplexing
OHISS – Objective Helicopter Icing Spray System
OIPT – Overarching Integrated Team
OIS – Objective Instrumentation System
OneSAF – One Semi-Automated Forces
OneTESS – One Tactical Engagement Simulation System
OPFOR – Opposing Forces
OSBP – Office of Small Business Programs
OSD DOT & E – Office of the Secretary of Defense Director Operational Test and Evaluation
OSTS – OPFOR Surrogate Training System
- **OSTS-MBT** – OSTS Main Battle Tank

OTC – Operational Test Command
OT-TES – Operational Test- Tactical Engagement System
OTVC – Operational Threat Vehicle Company
P25 – Project 25
P3I – Preplanned Product Improvement
PAAR – Pre-brief After Action Review
PARC – Pacific Alaska Range Complex
PARC – Principal Assistant Responsible for Contracting
PEO C3T – Program Executive Office, Command, Control and Communications Tactical
PEO STRI – Program Executive Office for Simulation, Training and Instrumentation
PC IGs – Personal Computer Image Generators
PG – Precision Gunnery
PGS – Precision Gunnery System
PM – Program Manager
PM – Project Manager

PMCS – Periodic Maintenance Checks and Services
PM Field OPS – Project Manager Field Operations
PM TRADE – Project Manager for Training Devices
POC – Platoon Operation Center
POC – Primary Operating Centers
POI – Programs of Instruction
POR – Program of Record
PPBES – Programming, Budget and Execution System
PRU – Packet Radio Units
PSG – Project Support Group
PTP – Point-to-Point
PTS – Precision Target Signatures
PU – Player Unites
QV – Quantitative Visualization
RCS – Research Cross Section
RCTS – Route Clearance Training Services
R&D – Research and Development
RDA – Research, Development & Acquisition
RDECOM – Research and Development Engineering Command
RDT&E – Research, Development, Test and Evaulation
REP – Resource Enhancement Program
RF – Radio Frequency
RFA – Red Flag Alaska
RLCT – Realistic Low Cost Target
ROPS – Range Operations
RPVT – Remotely Piloted Vehicle Target
RTCA – Real Time Casualty Assessment
RTI – Run-Time Infrastructure
RV – Reconnaissance Vehicle
RVS – Reconfigurable Vehicle Simulator
RVTT – Reconfigurable Vehicle Tactical Trainer
RWIS – Radio-Wire Integration System
SAF – Semi-Automated Forces
SAGIS – Special Operations Forces Air Ground Simulation
SBCT – Stryker Brigade Combat Team
SBUDs – Simulator Block Updates
SCoPIS – Self-Contained Portable IED Simulator
SCORM – Sharable Content Object Reference Model
SCT – Shadow Crew Trainer
SDZ – Surface Danger Zone
SE – Synthetic Environment
SE – Systems Engineering
SEO – Systems Engineering Office
SEP – System Enhanced Package
SETA – Systems Engineering and Technical Assistance Services
SH – Shoot House
SIB – Separate Infantry Brigade
SIM/STIM – Simulation/Stimulation
SIM-C2 – Simulation-Command and Control
SIMCI – Simulation to C41 Interoperability
SMCS – Simulated Mine Clearing System
SME – Subject Matter Experts
SMODIM – Smart Onboard Data Interface Module
SOA – Special Operations Aviation
SOAR(A) – Special Operations Aviation Regiment (Airborne)
SOATC – Special Operations Aviation training Company
SOF – Special Operations Forces
SOFPREP-SC – Special Operations Forces Planning, Rehearsal and Execution Preparation – Support Contractor
SOF TEAMS – Special Operations Forces Training, Engineering and Maintenance Support
SoSCOE – System of Systems Common Operating Environment
SPU – Simulation Player Unit
SRTA – Short-Range Training Ammunition
SSI TESS – Soldier Systems Integration Tactical Engagement Simulation System
STAR – Student Training Recruitment
STELIR – Special Operations Forces Technology for Eye Limiting Image Resolution
STIL – System Test and Integration Laboratory
STOC II – Simulation and Training Omnibus Contact
STRAC – Standards in Training Commission
STS – Stryker TOW Simulator
SUGV – Small Unmanned Ground Vehicle
T&E – Test and Evaluation
TAC – Terminal Attack Control
TACSIM – Tactical Simulation
    TACSIM CDS – TACSIM Cross-Domain Solutions
TAD – TOW ATWESS Device
TADSS – Training Aids, Devices, Simulators & Simulations
TBCC – Threat Battle Command Center
TBV – Tactical Battlefield Visualization
TC – Training Circular
TCC – Technical Control Cell
TCC – Training Common Components
TCS – Target Control System
TE – Tracer Effects
TEMO – Training, Exercise and Military Operations
TENA – Training Enabling Architecture
TES – Tactical Engagement Simulation
TESS – Tactical Engagement Simulation System
TH-67 – Training Helicopter 67
TIED – Training Improvised Explosive Device
    TIED2 – Training Improvised Explosive Device, Increment 2
TILO – Technical and Industrial Liaison Office
TISP – Tailored Information Support Plans
TLD – TOW Laser Device
TMDE – Test Measurement and Diagnostic Equipment
TMI – Targets Management Initiatives
TMO – Targets Management Office
TOC – Tactical Operation Center
TOW – Tube-launched, Optically-tracked, Wire-guided
TRACR – Targetry Range Automated Control and Recording
TRADOC – U. S. Army Training and Doctrine Command
TRMC – Test Resource Management Center
TS/SCI – Top Secret Sensitive Compartmented Information
TSA – Target Signature Arrays
TS IPT – Training Systems Integrated Product Team
TSN – Test Support Network
TSP – Training Support Packages
TSPI – Time-Space-Position Information
TSV – Through Sight Video
TTCS – Target Tracking Control System
TTP – Techniques, Tactics and Procedures
TTT – Table-Top Trainer
TWGSS – Tank Weapon Gunnery Simulation System
UAC – Urban Assault Course
UAE – United Arab Emirates
UAS-T – Unmanned Aerial System - Target
UAV – Unmanned Aerial Vehicle
UHF – Ultra High Frequency
UO – Urban Operations
UPS – Uninterruptible Power Supply
USAF – United States Air Force
USAOTC – U.S. Army Operational Test Command
USSOCOM – United States Specials Operations Command
VBS2 – Virtual Battle Space 2
VCCT – Virtual Combat Convoy Trainer
VIIP – Vehicle Instrument Interface Package
VISION – Versatile Information System Integrated On-line
VISMODS – Visual Modifications
VFR – Visual Flight Rules
VMMD – Vehicular Mounted Mine Detector
VPS – Virtual Patient System
VRCT – Virtual Route Clearance Trainer
VSA – Virtual Simulation Architecture
WAATS – Western Army National Guard Aviation Training Site
WAN – Wide Area Network
WARSIM – Warfighters' Simulation
WFF – Warfighter FOCUS
WITS – Wireless Integrated Target System
WSMR – White Sands Missile Range
WTI – Warrior Training Integration
XM – Transition Manager
YTA – Yukon Training Area

Index

12350 RESEARCH PARKWAY
ORLANDO, FL 32826-3276

HTTP://WWW.PEOSTRI.ARMY.MIL